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343 The Loriner; Opinions and Observations on Bridle-bits and the suitable bitting of Horses, with illustrations by **Benjamin Latchford**, Bridle-bit, Stirrup, and Spur-maker, to Her Majesty, H.R.H. the Prince of Wales, etc., 11 Upper St. Martin's Lane, London, W.C. 1871.

4to. 57 pp., with 148 illustrations of bits, spurs, and stirrups. M., 9 in. by 7 in.

It contains a Treatise on the suitable bitting of Horses, with a description of a new system of Bridle-bits. Invented by Don Juan Segundo. Translated from the Original Spanish Manuscript, which was dedicated to H.M. George IV. in 1832, and first printed with the "Loriner," by Benjamin Latchford.

A Horse's Petition to his Master.

Going up hill, Whip me not.
Going down hill, Hurry me not.
On level road, Spare me not.
Loose in stable, Forget me not.
Of Hay and Corn, Rob me not.
Of clean Water, Stint me not.
With sponge and brush, Neglect me not.
Of soft dry bed, Deprive me not.
Tired or hot, Wash me not.
If sick or cold, Chill me not.
With bits and reins, Oh jerk me not.
And when you are angry, Strike me not.

THE LORINER.

OPINIONS AND OBSERVATIONS ON

BRIDLE-BITS

AND THE

SUITABLE BITTING OF HORSES,

WITH ILLUSTRATIONS

BY

BENJAMIN LATCHFORD,

Bridle-Bit, Stirrup, and Spur Maker,

TO

HER MAJESTY, H.R.H. THE PRINCE OF WALES, ETC.,

11, *UPPER ST. MARTIN'S LANE, LONDON, W.C.*

LONDON:
PRINTED BY NICHOLS, SON, & CO., 11, LONG ACRE, W.C.

1871.

THE LORINER.

FOR some years past, many of my friends and acquaintances have expressed a very great wish that I should put on record my opinions on and experiences of, the proper Bitting of Horses, which I now do as briefly and explicitly as I can. The proper title for my profession is Loriner, which signifies a Bridle-Bit Maker. One of the most respectable Companies of the City of London is the Worshipful Company of Loriners or Bridle-Bit Makers—*(see appendix)*.

Occasionally some one writes on the proper bitting of horses, sometimes giving their opinion on the construction of the bridle, saddle, or the harness, (neither of which has anything to do with the proper bitting of horses); giving but little edification or instruction to the class of society of this country who keep horses, and who in all probability, know more practically, than the writers of such articles. I have always found in my long experience that the horse's mouth and temper may be compared to a lock, so made, that only one key will fit it; and to find the right Bit—patience and perseverance are necessary in so doing. On no account punish the horse; on no account hurt his mouth. When my friends have come to me concerning their unmanageable horses, I invariably find the poor animal has been over bitted, or wrongly bitted, and recommend the easiest kind of bit, which, in nine cases out of ten, succeed. But there are exceptions to this rule; occasionally I have met with a good bred horse, the skin of whose mouth is very thick, thereby requiring a sharper mouthpiece to accommodate the sense of feeling;

but certainly never over-bit the horse. I can well remember when most riders habitually held on to the bridle;—thanks to better education in the equestrian art, such is now the exception, not the rule; for it cannot be expected the horse can do his work right or well, if he has to carry his rider with his mouth, neither can the rider derive the pleasure he seeks, unless he sits well in the saddle. If the bit does not suit the horse, he will tell his master so by such means as he can—such as restlessness, generally as soon as the bridle is put on, throwing his head about, yawning, going with his head on one side, or carrying his head unusually high or low. I believe the horse has naturally no vice; that every description of vice found in the horse is created by the treatment he receives from those in whose care he is placed. But I am straying from my professed object; I am a Loriner and ought to confine myself to bridle-bits alone. I will give one or two instances (out of hundreds I am acquainted with):—At the time when JOHN TILBURY of Pinner, Middlesex, kept many first-class horses, an intimate friend of his whose town house was in Berner's Street, Oxford Street, and his country house at Richmond Hill, had a beautiful black cab horse, he was a full sized animal, of splendid symmetry and his pace not amiss, as he always took the cab with his master, mistress, and tiger, without the use of whip, from one house to the other within the hour. He came to me, after unsuccessfully trying all the bits Mr. TILBURY had; and by Mr. TILBURY'S recommendation he told me the horse had worked extremely well for some considerable time, but for the last six or eight months had carried his head on one side, so much so that he was sure he could not see his way properly. I told him I thought the horse was over bitted; he was quite sure he was not. I shewed him an old Stanhope bit, No. 85, with a very easy mouthpiece, which I offered to lend him to try; it was very old fashioned and of scarcely any value; he said, "Do you want to see my cab smashed and one or more killed?" I asked him whether the horse was a kicker; he said, "No he was not;" then I offered to get into the Cab myself and drive, but he said my life was of more value to society than his, and that it would appear cowardly of him if anything was to occur; so after an hour or so, he consented to try the bit. I put it on, he drove away, and in half an hour called to ask me to lend it to him for a few days; I told him to keep it a week or fortnight. He came in about a fortnight after and asked me the price of the bit. I told him I

would make one for him with the cheeks to match his carriage bit, which was a very handsome one I had made a short time previously; he was very pleased with the bit, and paying me the high price of his carriage bit for it, said it was the cheapest article he had ever bought, for with it his horse run as straight as an arrow—and that the bit and horse should never be separated while he lived.

Another instance is in the case of a not very rich Gentleman, born and bred to the hunting-fields, who bought horses, (and he thought were superior hunters,) that the owners could not manage, for, say, twenty guineas. By patience and kind perseverance he would find the right sort of bit, and by strict attention, coax him away from any and every vice he found the horse had previously contracted. Some time since he came to me for a No. 2. Segundo bit, and related to me as follows: I gave twenty guineas for a horse I have now sold; I never give more than twenty guineas, and when I sell, my price invariably is one hundred and twenty guineas. The horse that I have just sold, I purchased for twenty guineas, because no one could ride him. First, I found the bit to suit his mouth, then with kind treatment and proper exercise, I soon had the best hunter in the field. A young nobleman, with three or four good hunters, was very vexed that he could not keep with me; he bought my horse, which of course I sent to his stables. The next out the horse was no better than his others; another day and still the same; he cursed, he swore, and in his passion, said he would have the horse shot. Of course the Gentlemen of the hunt would not allow such a thing with a horse they had seen work so well, so he sold me the horse for twenty guineas, and I put my old bridle on the right bit—and took the lead as before, which so exasperated the young nobleman, that he challenged my education in riding; said he could ride as well as I could, he had been taught by as good masters as I had, and a great deal more of such intemperate language, and after some five or six good runs, said he must have the horse, for he could not longer bear to be left in the cold. So next time we went out, being very near each other, and seeing he was very much out of temper, I offered to change seats: I ride his horse and he ride mine; and all went well. He was delighted, and on our return he gave me the second one hundred and twenty guineas, and I sent the horse to his stables—Bridle and Saddle, just as he was; with instructions always to use him in that Bridle

and Saddle, and no other; and as I have another horse the No. 2. Segundo bit suits so well—I am come to buy one." I could give hundreds of similar instances of unintentional cruelty to horses, by forcing them to go with wrong bits, but hope the two will suffice. I frequently tell my friends, that out of every twenty bits I make, nineteen are for men's heads and not more than one really for the horse's head. I admit temper sometimes has something to do with it; but are not some of us bad tempered sometimes? What better means have we to meet such cases, than patience and kindness? Please your horse and your horse will please you. It is a great mistake on the part of any one to suppose he has found any one peculiar Bit that will suit all horses. No part of God's creation is more varied—consequently require more patience and kind attention—than the horse's mouth and temper.

Of the many in the last half-century that have written on the suitability of one sort of Bit for all horses, is a Treatise by Don Juan Segundo, 1832, printed herewith, at that time the greatest authority in Spain. He constructs his Bit scientifically, strictly in accordance with the anatomy of the horse's head, and more particularly the interior of the mouth; he varies in the length of cheek, the thickness of mouth-piece and curb chains, but all the same in principle. He being so thoroughly Spanish, and the horses so different (Moorish) to ours, I found it necessary to deviate from his strict rules in a few instances in the construction of his Bits, in order the better to suit our English horses; where, with all his great science included, this Bit does not suite all horses;—but give credit where credit is due. I have found it suit more horses than any other, except the Melton Mouth Bit, No. 28; this has been in greatest demand during the last thirty years; next in demand has been the Segundo Bit.

Herewith are a few drawings representing such Bits as are now and have been principally in use in Great Britain during the last century.

In the sincere wish that this little work may be found acceptable, I beg to subscribe myself,

Your very obedient Servant,

BENJAMIN LATCHFORD.

A HORSE'S PETITION TO HIS MASTER.

Going up hill, Whip me not.
Going down hill, Hurry me not.
On Level road, Spare me not.
Loose in stable, Forget me not.
Of hay and corn, Rob me not.
Of clean water, Stint me not.
With sponge and brush, Neglect me not.
Of soft dry bed, Deprive me not.
Tired or hot, Wash me not.
If sick or cold, Chill me not.
With bits and reins, Oh! jerk me not.
And when you are angry—

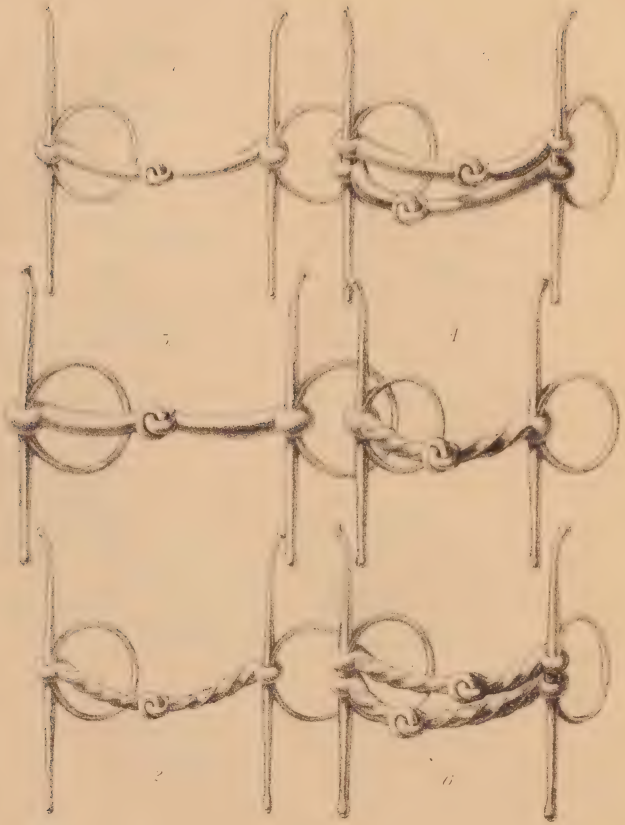
STRIKE ME NOT.

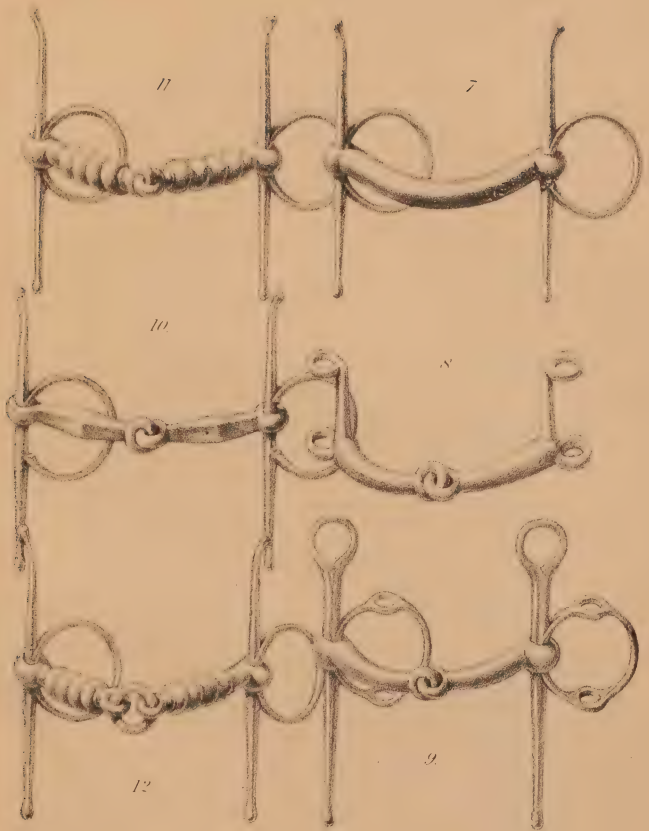
LIST OF ENGRAVINGS.

1.—Race Snaffle.
2.—Twisted race Snaffle.
3.—Hunting Snaffle.
4.—Twisted hunting Snaffle.
5.—Double mouthed Snaffle.
6.—Twisted double mouthed Snaffle.
7.—Mulling mouthed Snaffle.
8.—Duncan gag Bradoon.
9.—Nelson gag Snaffle.
10.—Persian Snaffle.
11.—Roller mouthed Snaffle.
12.— do. with ring for players.
13.—Magenis Snaffle.
14.—Wood's Snaffle.
15.—Chain mouthed Snaffle.
16.—Double ringed Snaffle.
17.—Twisted double ringed Snaffle.
18.—Starcheek double ringed Snaffle.
19.—Muscovy or anti-rearing Bit.
20.—Wind sucker Bit.
21.—Mouthing Bit, five players.
22.—Dravelling Snaffle.
23.—Colt's Snaffle with player.
24.— do. larger size.
25.—Racing Bit and Bradoon.
26.—Leicester Bit and twisted Bradoon.
27.—Bit with port and bradoon.
28.—Melton Bit and Bradoon.
29.—Hunting Bit, slide mouth.
30.— do. do. 7 rollers.
31.—Dick Christian Bit and Bradoon.
32.—Banbury Bit.
33.—Slide half twisted Pelham.
34.—Lownde's Pelham.
35.—Plain Pelham.
36.—Twisted Pelham.
37.—Lipping Hanoverian low port.
38.—Lipping Hanoverian.
39.— do. plain mouth.
40.—Straight cheeked Hanoverian.
41.—Segundo Bit.
42.—Iron duke Bit.
43.—Thurlow Bit.
44.—Bentinck Bit.
45.—Stockton Bit.
46.—Chifney Bit.
47.—Peter's Bit.
48.—Turkish Bit.
49.—Branch cheek Bit.
50.—Pad cheek Bit.
51.—Balloon cheek Bit.
52.—Globe cheek Bit.
53.—Branch cheek Bit with double shells.
54.— do. with open tails, bolts & rings.
55.—Pad cheek Bit with open work.
56.—Snake cheek Bit.
57.—Mameluke Bit.
58.—Clipper Bit.
59.—Spanish Cavison.
60.—Parisian Bit.
61.—Taylor's simple Bit.
62.—Harry highover Bit.
63.—Wellington Snaffle.
64.—Sawmouth Bradoon.
65.—Meadow's Snaffle.
66.—Rarey's Snaffle.
67.—Riding Bit swivel tails.
68.—Brighton Bit.
69.—Park fancy Bit.
70.—Fenner's Bit.
71.—Buxton harness Bit.
72.— do. Queen's pattern.
73.— do. with high port.
74.—Buxton Chifney.
75.— do. slide half twisted mouth.
76.—Buxton Pelham.
77.—Buxton Bit with slip port.
78.—Buxton Bit with gridiron player.

79.—Buxton slide 7 roller mouth.
80.—Peterboro' harness Bit.
81.—Buxton Segundo.
82.—Buxton banbury Bit.
83.—Stockton harness Bit.
84.—Willis's Bit.
85.—Stanhope Bit.
86.—Tilbury Bit.
87.—Higman's harness Bit.
88.—Ford's harness Bit.
89.—Guard check Bit, slide half twisted mouth.
90.—Thurlow harness Bit.
91.—1st Life Guards' Bit.
92.—2nd Life Guards' Bit.
93.—Royal Horse Guards' blue Bit.
94.—Cavalry Officers' Bit.
95.—Rifles' Bit.
96.—Royal Engineers' Bit.
97.—Infantry mounted Officers' Bit.
98.—Staff Officers' Bit.
99.—Queen's A.D.C. Bit.
100.—Generals' Bit.
101.—Field Marshals' Bit.
102.—Prince's Bit.
103.—Solid Bottom Stirrup.
104.—2 barred Stirrup.
105.—3 barred Stirrup.
106.—Solid bottom Stirrup with Prussian sides.
107.—Hussars' Stirrup.
108.—Spring Stirrup.
109.—Latchford's Ladies' Patent Safety Stirrup.
110.—Boys' clog Stirrup.
111.—Ladies' slipper Stirrup.
112.—Ladies' Victoria Stirrup.
113.—Lennon's patent Stirrup.
114.—Box spur neck.
115.—Box spur swan neck.
116.—Gents' box Spur.
117.—Gents' box swan neck spur.
118.—Latchford's new patent Spur Box.
119.—Military regulation box Spur.
120.—Maxwell's patent Spur Box.
121.—Latchford's patent Spur and box for India and the colonies.
122.—Life Guards' dress box spur.
123.—Racing Spur.
124.—Hunting Spur.
125.—Hunting Spur swan neck.
126.—Gents' riding sewarrow Spur.
127.—Gents' trouser sewarrow Spur.
128.—Ladies' spike box Spur, neck and box.
129.—Ladies' spike sewarrow Spur.
130.—Ladies' Spur with rowel gard.

A.—Dress harness Bit.
B.—Dress harness Bit.
C.—Pembroke harness Bit.
D.—Egyptian state harness Bit.
E.—Pembroke dress harness Bit.
F.—Russia state harness Bit.
G.—Pembroke state harness Bit.
H.—George III's state harness Bit.

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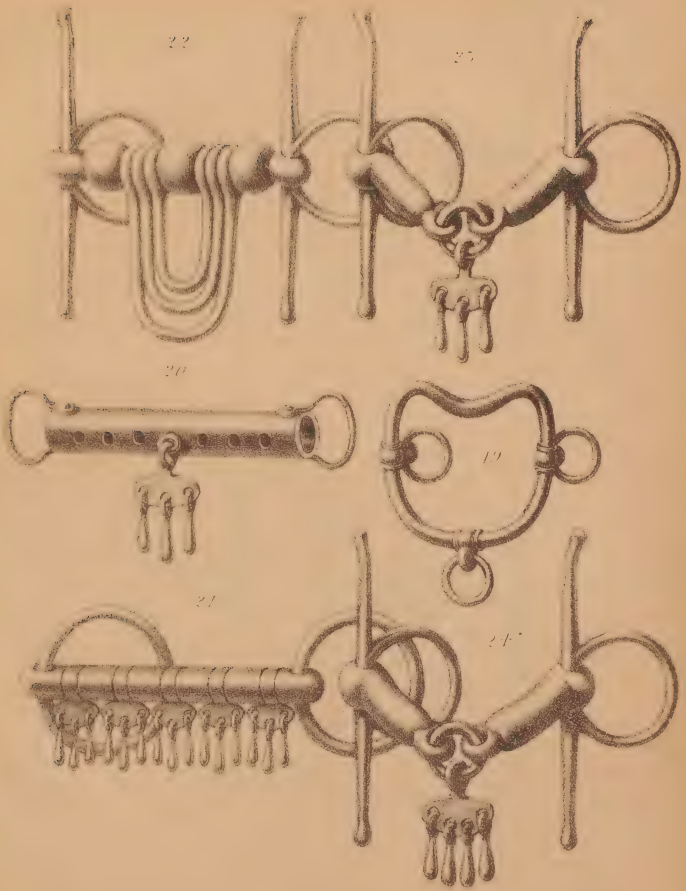

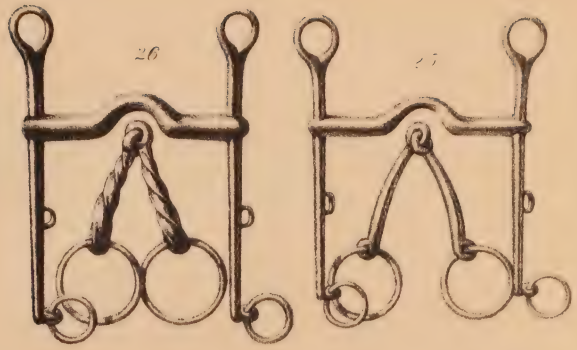
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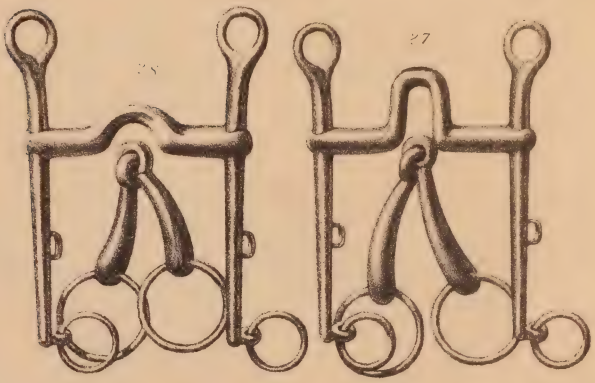
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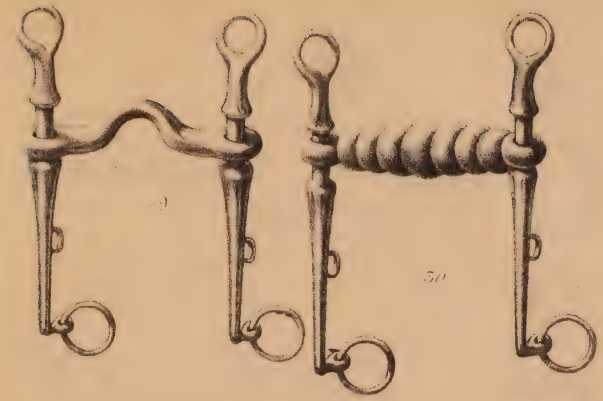

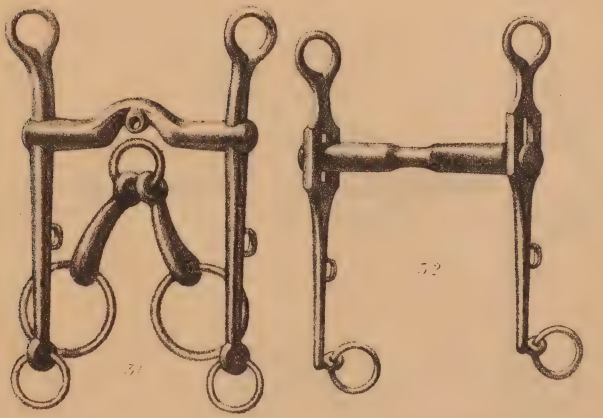

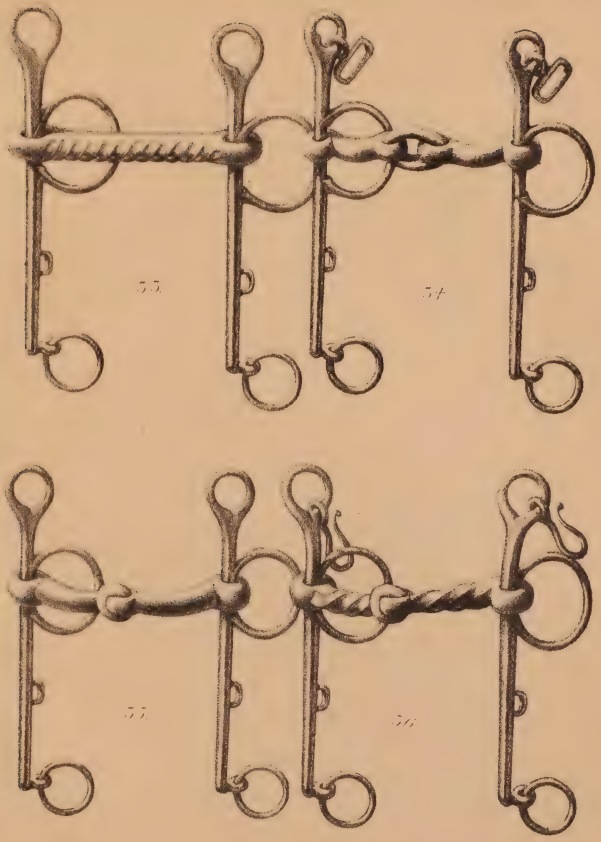

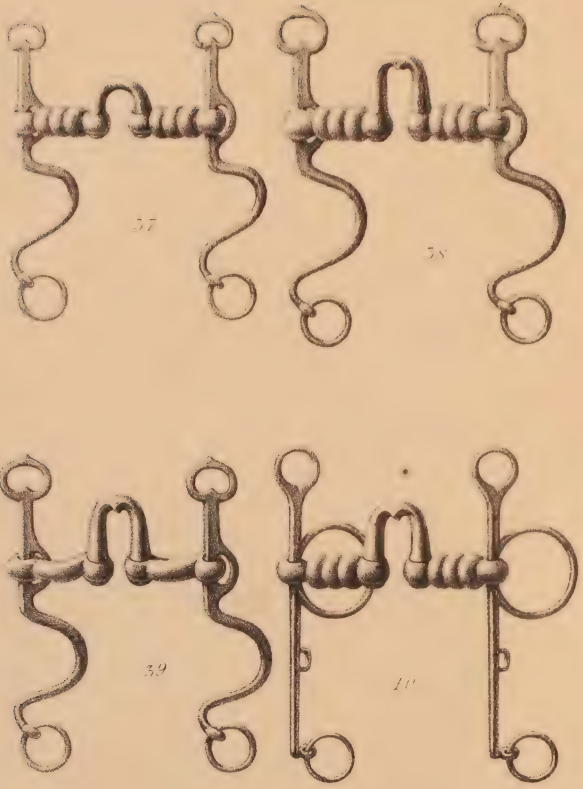

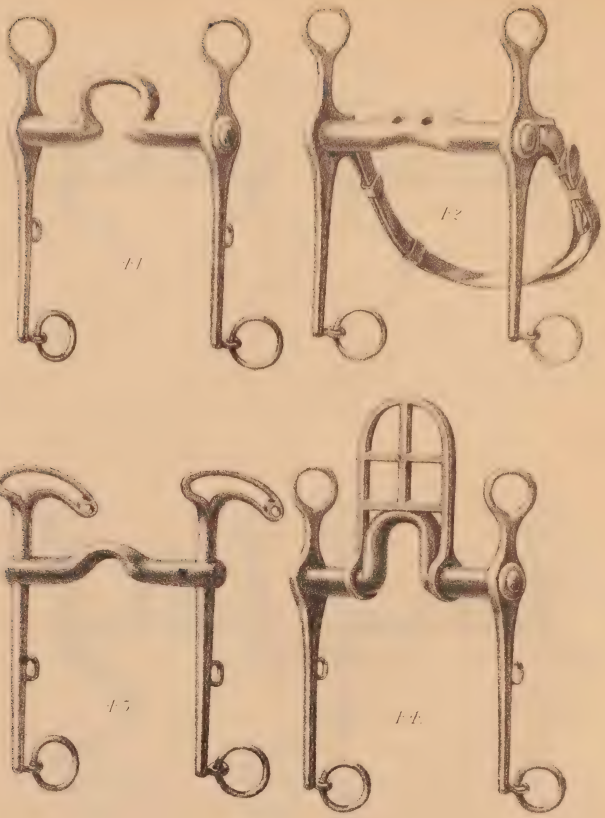

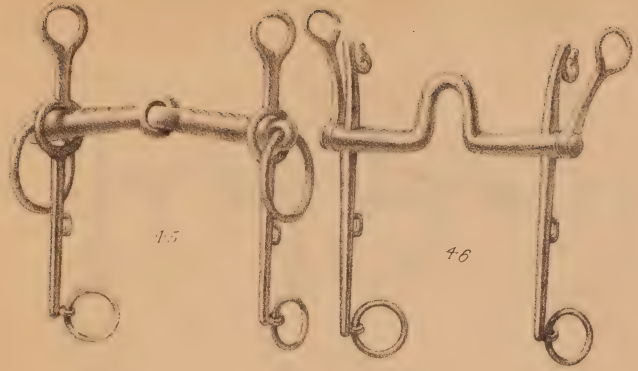
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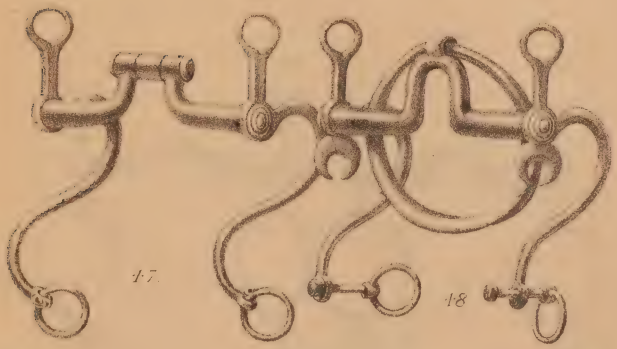
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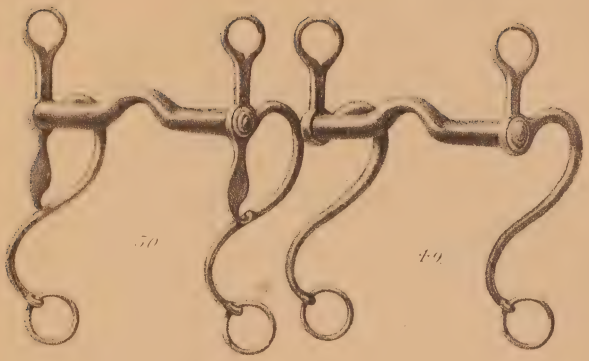

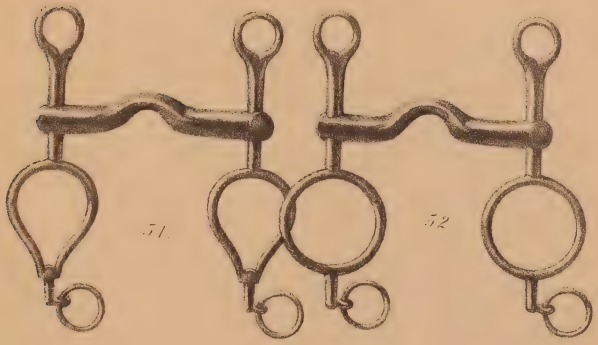

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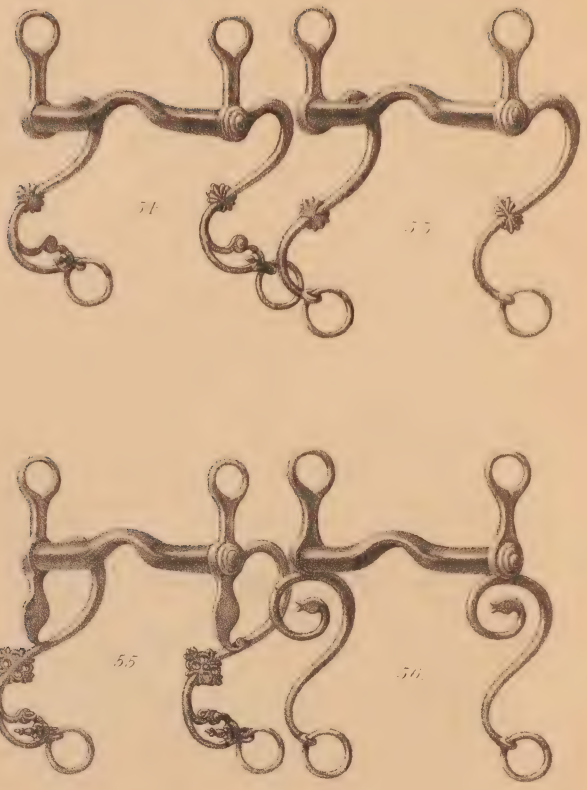

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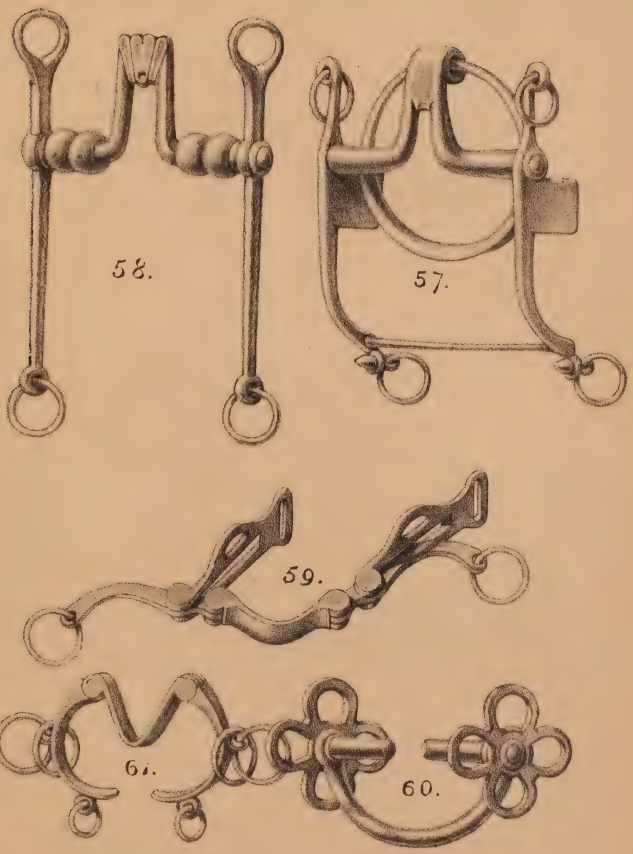

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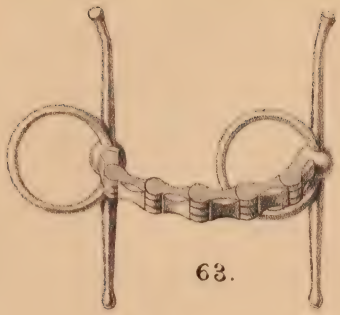

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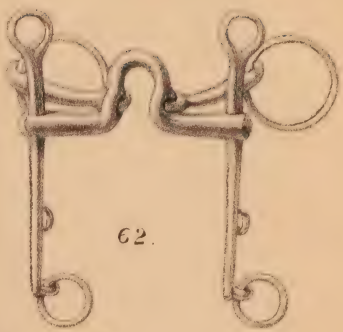

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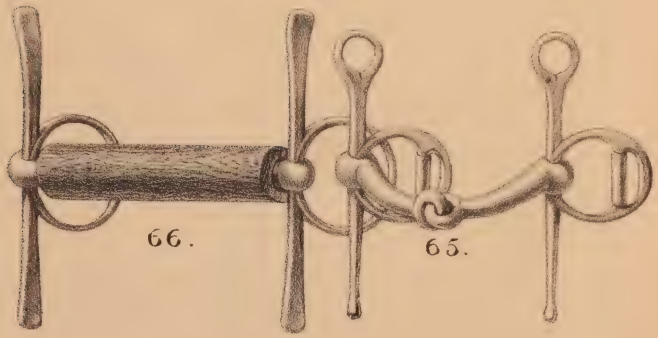

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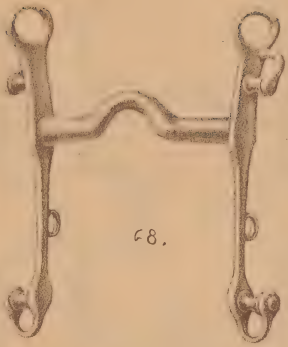

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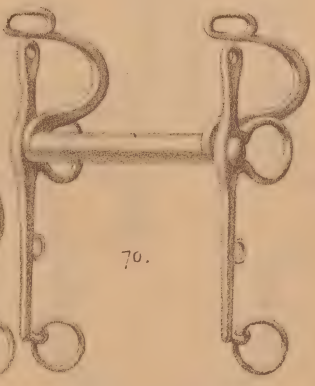

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MUCKLESTON, DEL & LITH,
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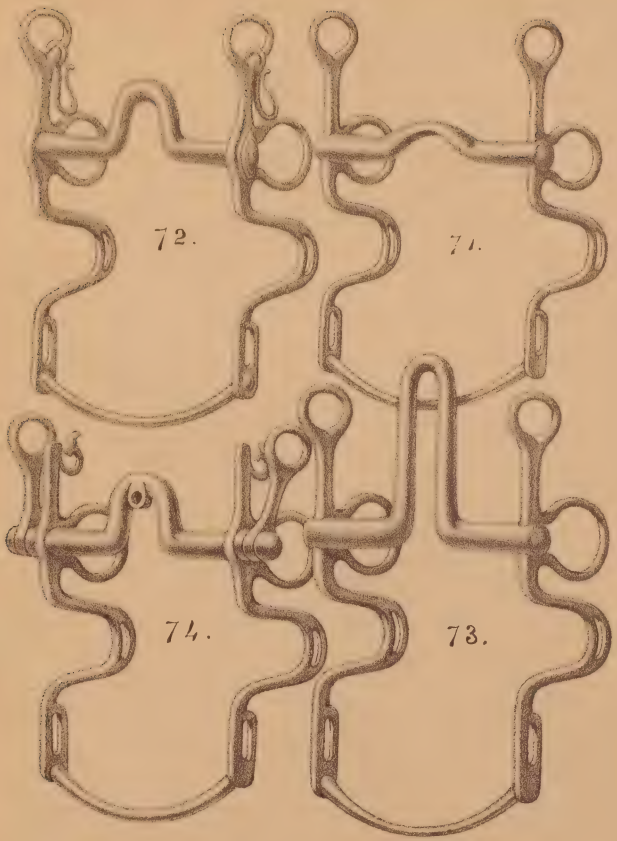
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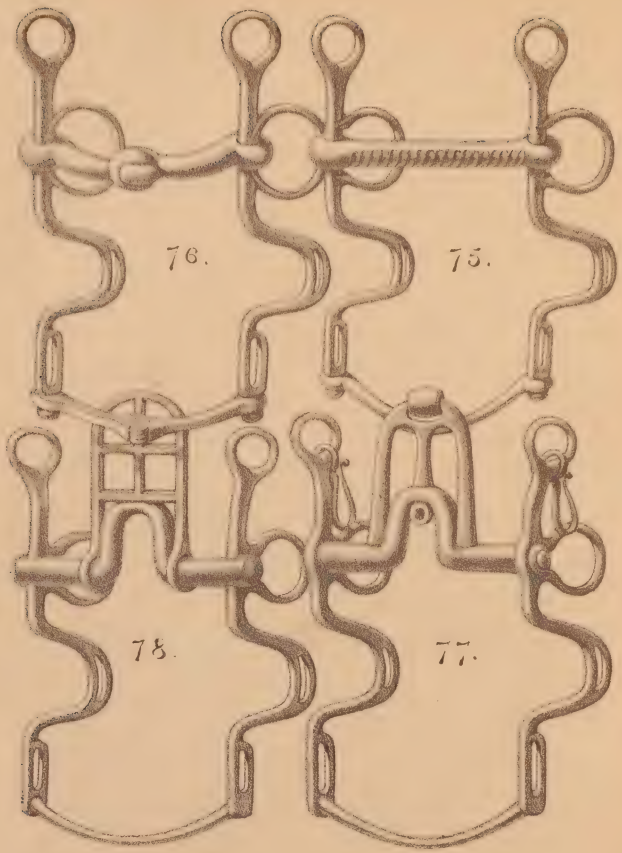

37 HARMAN STREET,
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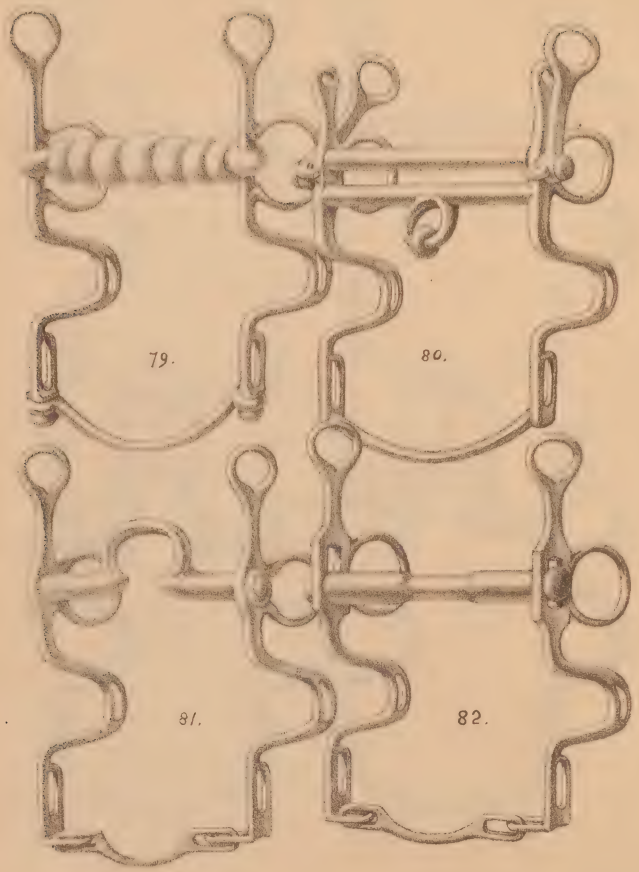
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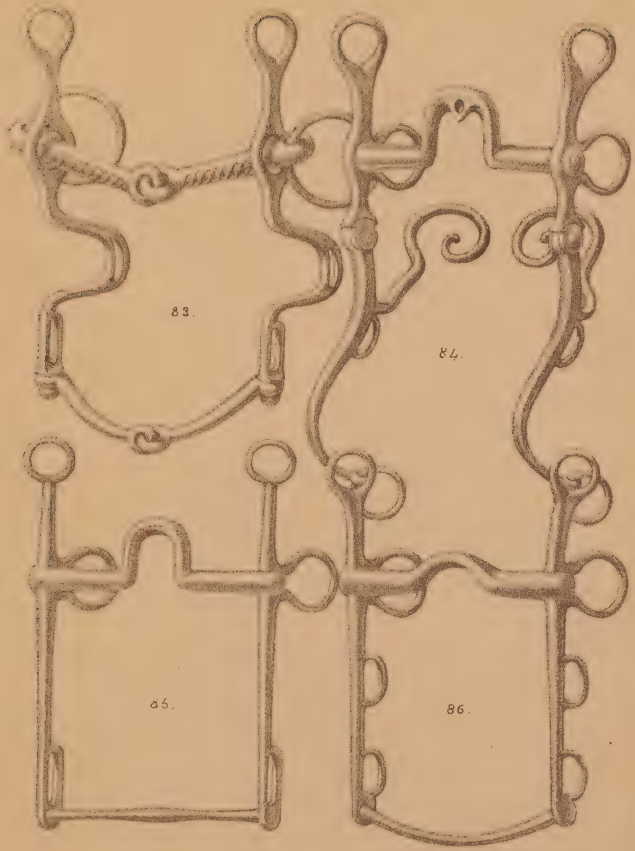
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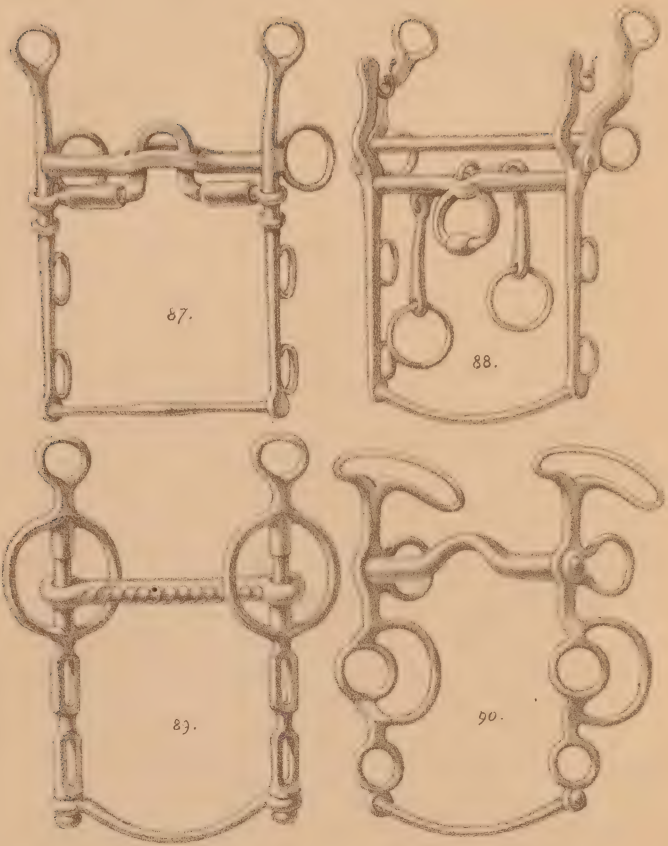

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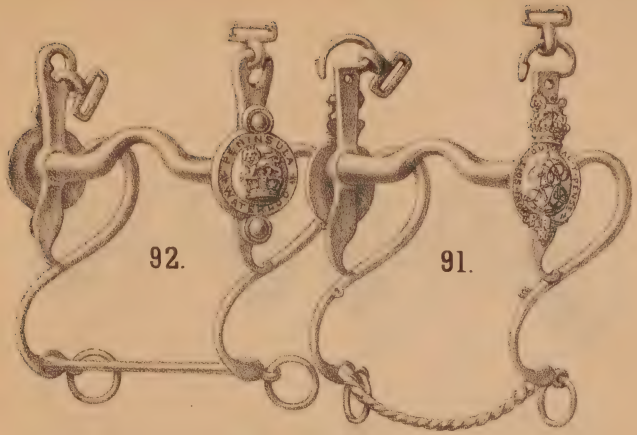

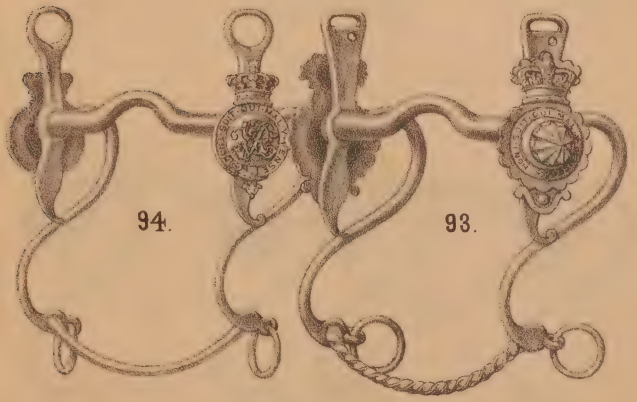

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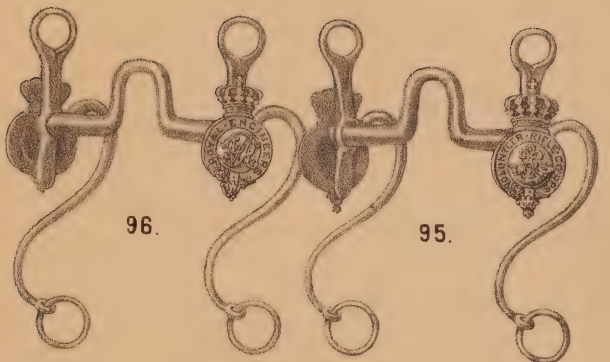

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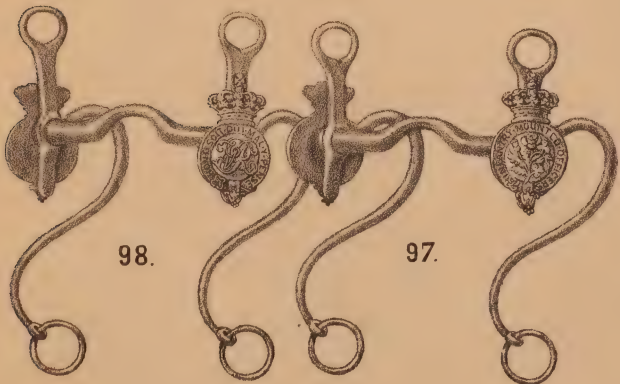

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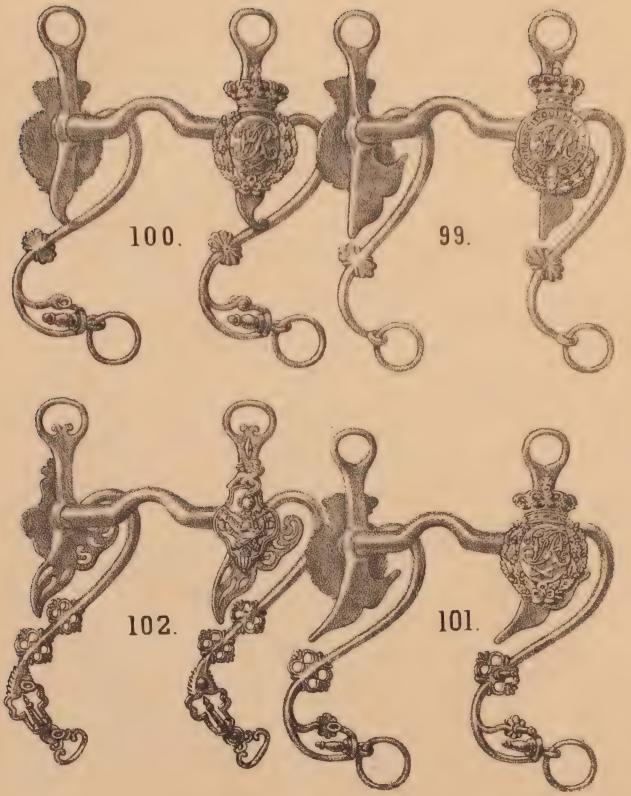

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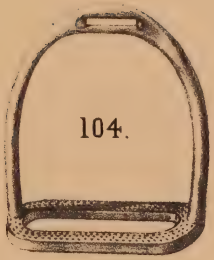

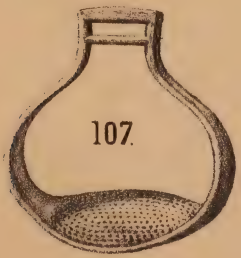

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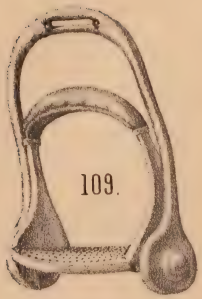

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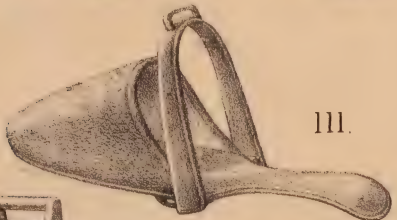

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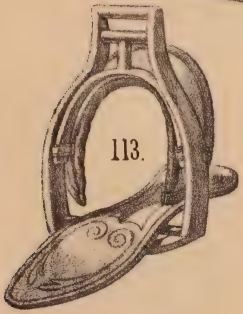

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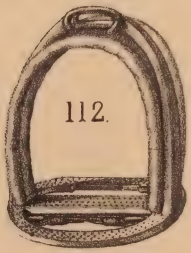

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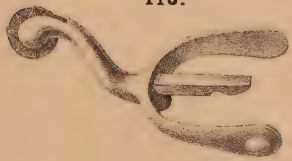

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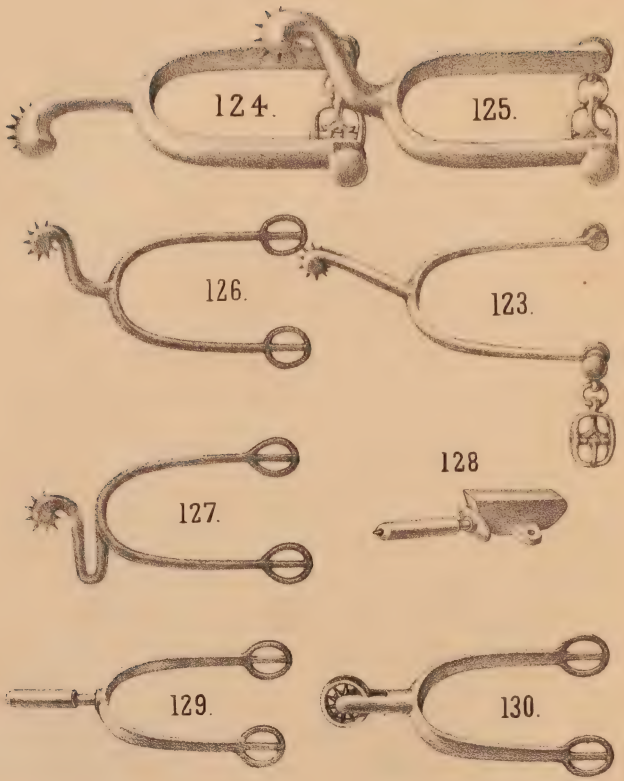
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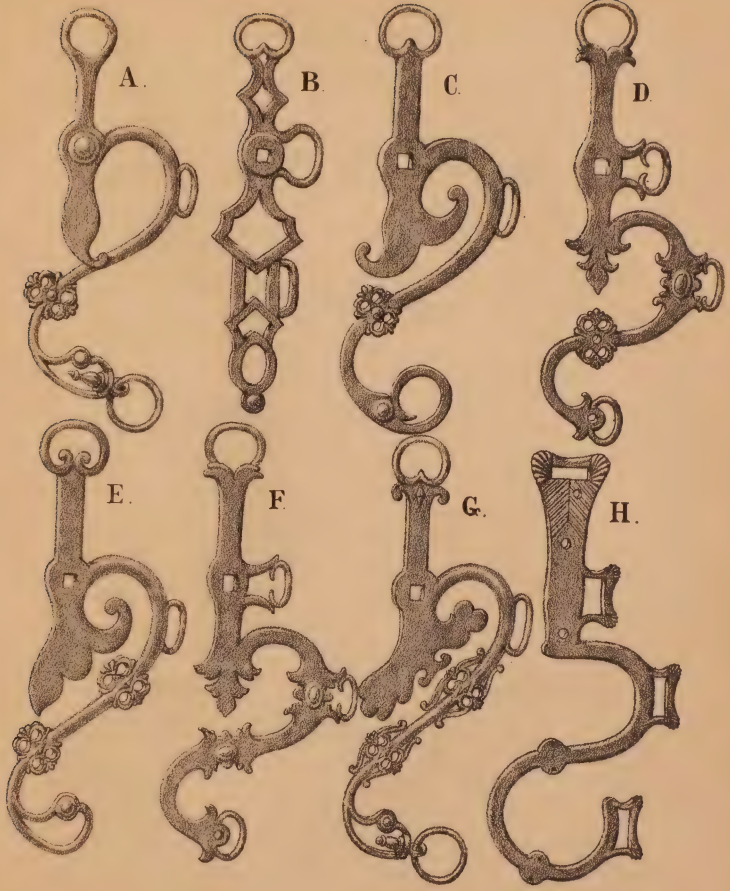


L. & C. B. LITH.
HARMAN STREET.
HOLLAND ROAD.

A TREATISE

ON

THE SUITABLE BITTING

OF

HORSES;

WITH

A DESCRIPTION OF A NEW SYSTEM OF BRIDLE BITS,

INVENTED BY

DON JUAN SEGUNDO.

TRANSLATED FROM THE ORIGINAL SPANISH MANUSCRIPT.

1832.

NOTICE BY THE TRANSLATOR.

IN a country like England, where horses are so numerously employed, and so justly valued both for their usefulness and the pleasure they bestow on a large portion of society, a Treatise, the object of which is to establish fixed rules for their complete management, upon principles founded on nature, and on the theory and practice of the art of horsemanship, and combining the amelioration of the condition of those animals with the ease and safety of man in all his modes of employing them, cannot fail to be appreciated by all those whose experience points out to them the insufficiency and imperfectionof the system hitherto pursued in the bitting of horses.

The clearness and precision with which those principles are developed by the author, and the sound and convincing reasonings by which they are supported, are additional recommendations to a work which, being the only truly scientific method at present existing in Europe, respecting this important branch of horsemanship, is the more valuable, as everything it contains is the result of long and tried experience.

Various causes, which can in no way interest the public to know, have retarded both the publication of this Treatise and the introduction of the valuable invention to which it refers; but as their importance and merit have not suffered by this delay, it is presumed they both will be hailed with pleasure by the amateurs and professors of the equestrian art.

DEDICATION.

TO HIS

Most Excellent Majesty,

KING GEORGE IV.

Sire,

Whatever claims this short Treatise may have to public attention, its chance to notice would have been more precarious had not your Majesty designed to extend to it your royal protection, by permitting me to dedicate it to your Majesty.

Impressed, therefore, with a high sense of the honour which you have been graciously pleased to confer upon, and which is the more flattering as it proceeds from a Sovereign whose reputation as an accomplished equestrian is so universally acknowledged, I beg, most respectfully, to express to your Majesty my sincerest gratitude, as well as my heartfelt satisfaction, at seeing the observations contained in this Treatise have been found worthy of your royal approbation.

With the most profound respect, I have the honour to subscribe myself,

Sire,

Your Majesty's most humble,

most obedient Servant,

JUAN SEGUNDO.

INTRODUCTION.

TWO of the most indispensable as well as estimable qualities in a horse are, without doubt, a good mouth and a proper position of the head. Horses, in general, are deficient in these two requisites, a few from natural causes, and the greater number from the defective construction and injudicious application of the bits till now in use. This is to be attributed to the little progress hitherto made in the art of bitting horses, an art which, though so useful and advantageous to the noble exercise of horsemanship, and so necessary to the safety and convenience of man in his different modes of employing those animals, is so obscurely treated in all the books written on the subject, that nothing but doubts and inaccuracies can result from an attempt to reduce to practice the arbitrary rules laid down by their respective authors. Hence the prodigious variety in the forms and dimensions of bits used in former and present times, all of which seem to proclaim the difficulty of adapting those machines to the mouths of horses, so as to answer the wishes of their riders; and hence, too, why so many amateur horsemen, and even professed masters of equitation, puzzled in their choice of so many bits, multiply experiments on their horses, imagining that some lucky chance or other will put them in possession of such bits as will give their horses a firm and just *appuy*, while, to their no small disappointment, they find they have only succeeded in destroying the animals' mouths; a result which is but a natural consequence of the imperfection of the bits in general use.

Convinced by experience of the truth of these observations, and desirous of removing the difficulties that opposed themselves to the suitable bitting of horses, I resolved to make the horses' mouths the subject of my particular study, examining the various causes that tend to render them defective, together with the different effects produced by the bit. After several years of attentive investigation, I was enabled to determine, on fixed principles,

and according to the various qualities of mouths by which horses are distinguished, the form, proportions, and manner after which each part of the bit should be put together, so as to suit the class of mouth to which it should be applied, and render the management of the horse easy to the rider, and mild to the animal. To effect this purpose, I found it necessary to have a set of bits constructed on principles founded on the anatomy of horses' mouths, and on the theory and practice of horsemanship, simple in their mechanism, and in their form suiting the properties of each class of mouth, both internally and externally, and observing throughout those proportions that regulate the degree of power required for the complete control of the animal without the chance of injury to its mouth.

How far I have succeeded in the task I have undertaken is not for me to say; but I may be allowed to observe here, that previous to submitting the result of my experiments to the public, I have made repeated trials of my bits before several of the most eminent equestrians in France, England, Germany, Prussia, Spain, &c., and have the satisfaction to add, that my improvements have met with the sanction and approbation of all, the many flattering testimonies I have received (a few of which will be found appended to this Treatise,) showing the value attached by some to the theoretical, and by others to the practical, part of my invention.

QUALIFICATIONS.

Branches.

1	VERY HARD MOUTHED	*For Runaway Horses*
2	HARD MOUTHED	*For those that bear heavily on the hand.*
3	GOOD MOUTHED	*For those that have a good Apply & place their heads well.*
4	TENDER MOUTHED	*For those that shrink from the bit.*
5	STAR GAZERS	*For those that carry their heads too high.*
6	BORERS	*For those that carry their heads too low.*

MOUTH PIECES

A	HARD	*For Cheeks*	*Nos 1 & 2*
B	REGULAR	*For Cheeks*	*Nos 3, 5 & 6*
C	TENDER	*For Cheeks*	*No 4*

CURB CHAINS

1	VERY SEVERE	*For Bit,*	*No 1*
2	LESS SEVERE	*For Bit,*	*No 2*
3	REGULAR	*For Bit,*	*No 3*
4	MILD	*For Bit,*	*No 4*
5	SUFFICIENTLY MILD	*For Bit,*	*No 5*
6	SUFFICIENTLY SEVERE	*For Bit,*	*No 6*

BENJ LATCHFORD

Bridle Bit Maker

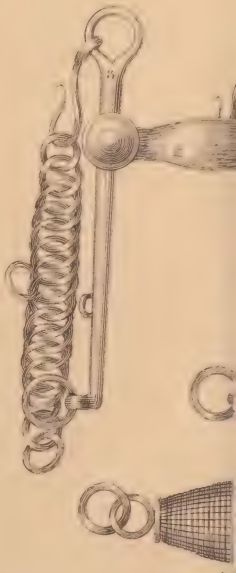
TO HIS MAJESTY

11, Upper St. Martins Lane,

LONDON.

...n and Lithographed by
... & Co 11 Long Acre, W.C.

Plan of Patent Bridle Bits shewing



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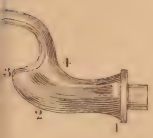

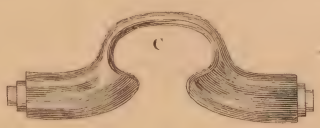

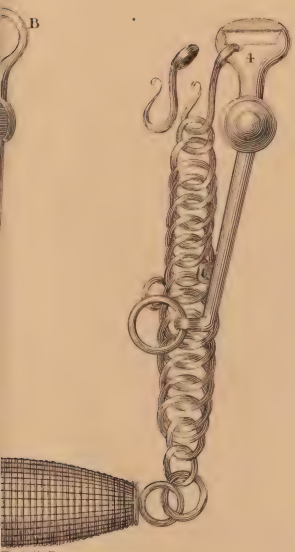

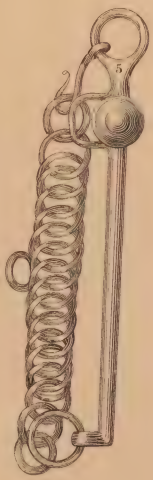

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A TREATISE

ON

THE SUITABLE BITTING OF HORSES.

CLASSIFICATION OF HORSES' MOUTHS.

AND DEFECTS IN THE POSITION OF THE HEAD.

IT is an opinion very generally prevalent, that there are as many classes of mouths as there are horses, and therefore that each of these requires a particular bit made to suit him. Were such a principle to be admitted, we would be obliged to relinquish all attempts at bitting horses properly, since it would be impossible to give any fixed rules for constructing as many kinds of bits as there are horses. After repeated experiments, however, I have ascertained, that so far from there being any truth in that opinion, there are only *four* classes of mouths, three defective and one naturally good. But as by means of the bit working upon the mouth, the defects of a bad position of the head are corrected, to those four classes two more should be added, belonging to such horses as are denominated *stargazers* and *borers*. Thus the *defects* to be corrected, in the suitable bitting of horses, will amount to *five*; but the obstacles to be overcome, including that arising from the preserving in a good condition the naturally good mouth, will be *six*; for each of which a bit, distinct in its proportions, will be required, and which I proceed to class under their respective heads.

1st Class, Bit No. 1. *Very hard mouthed.* — Some horses are so hard mouthed, that they are under no subjection to the bit, and run away with their riders.

2nd Class, Bit No. 2. *Hard mouthed.* — Horses comprised in this class are such as bear too heavily on the bit, and who, although they do not run away, weary and fatigue the rider's hand.

3rd Class, Bit No. 3. *Good mouthed.*

Good mouthed horses are known by their steady and light bearing, never leaning heavily on the hand, nor shrinking from the bit, and having their heads well placed.

4th Class, Bit No. 4. *Very tender mouthed.*

Horses of this description, not being able to endure the action of the bit, expose their riders to innumerable and serious accidents; such as rearing so erect as sometimes to fall backwards; suddenly stopping in a sharp trot, or at full gallop, and thereby jirking the rider from his seat on the least movement of the bridle; becoming restive, or refusing obedience to whip or spur.

5th Class, Bit No. 5. *Star Gazers.*

6th Class, Bit No. 6. *Borers.*

Horses comprised in these two last classes that carry their heads either too high or too low, being unable to look straight before them, are extremely dangerous animals, give an awkward appearance to their riders; have neither grace nor elegance of carriage, and are less capable of readily obeying the impression of the hand, and of being well broken.

Thus to restrain horses mentioned in the *First Class*, a very powerful bit will be necessary; but made so as to hold them in without bruising their mouths or exasperating them.

For those of the *Second Class*, a bit of less power will suffice.

For those of the *Third Class*, a bit neither too strong nor too mild will answer.

For those of the *Fourth Class*, one must be applied of an extremely mild character.

For those of the *Fifth Class*, a bit that will bring down the head to a more graceful and natural position will be required.

And, finally, for those of the *Sixth Class*, a bit must be employed that will oblige the horse to raise his head to a position less awkward in appearance, and less dangerous in the consequences, arising from this defect.

After the order in which I have classed the mouths of horses, and the bits suited to each, I have had six different bits made, by means of which *I reduce all horses to one and the same appuy*, taking the *Third Class* for a medium, as comprising good mouthed horses, and those that place their heads well.

A GENERAL IDEA OF THE HORSE'S MOUTH.

Before examining the causes which contribute to render a horse's mouth good or defective, the dimensions of those parts of it that come in contact with the mouth-piece ought to be carefully observed. These are the lips, the bars, the channel of the tongue, and the palate.

The lips are from 1 to 1¼ inch in thickness.

The bars are from ½ to ¾ of an inch in thickness.

The channel from ¾ to 1⅛ inch in width.

The palate from 1¾ to 2¼ inch in width,
and from ⅜ to ⅝ of an inch in depth.

But as it is not my intention to enter here into any explanation which has not an immediate reference to those two parts on which the bit *ought exclusively to act*, so as to guide or restrain the horse, as occasion may require, I shall confine myself to them only, and advert to a third, which I shall call *intermediate* or *obstructive*, because hitherto it has hindered the mouth-piece from acting freely on the bars. These three parts are the *bars*, the *chin*, and the *tongue*.

THE BARS.—These are formed like the *tibia* or human shin-bone, that is, the inner edge of the bone is sharp or less cartilagineous, and more salient than in its outward border, where it rounds off. Their shape varies in the following manner :—1st. They are either fleshy, round, and low ; in which case they contribute to render the horse's mouth hard, because the more they are furnished with flesh, the less sensibility they possess. 2ndly. They are moderately lean and moderately sharp, and then they constitute part of a good mouth. 3rdly. and lastly, they are very lean and very sharp, when they form part of a very tender mouth.

THE BEARD or CHIN.—This, like the bars, varies also in its formation, being, 1st, almost flat and fleshy ; 2ndly, round and less fleshy ; and, 3rdly, nearly sharp and very thin skinned. These differences, like the above, contribute, in a similar manner, and in the same order, to render the mouth either hard, good, or tender.

THE TONGUE.—This part differs in horses only in its being more or less large ; but it does not in the least contribute to render the mouth either hard or tender. It, however, creates a considerable difficulty in the bitting of horses, because, as the mouth-piece ought to act on the bars only, the tongue, by covering them with the breadth of its form, interposes between so as to prevent the free and exclusive action of the mouth-piece on the bars, and as, moreover, it possesses a great degree of sensibility, the least compression of it frets the animal, and obstructs the effect of the bridle ; hence why I call it *intermediate* or *obstructive*.

NATURAL CAUSES OF DEFECTIVE MOUTHS, AND FALSE POSITION OF THE HEAD.

Those horses which, besides fleshy bars and chin, have thick necks, and the top of the mane broad and spreading, are apt to run away, owing to the

insensibility of the mouth, added to the inflexibility of the cervical muscles. Such horses rank under the 1st. class, or *very hard mouthed.*

Those which, of these three defects, have only the two former, are comprised in the 2nd class, or *hard mouthed.**

Those which have the bars and chin of the regular form, as I have already described, belong to the 3rd class, or *good mouthed.*

Those which have the bars and chin too high, lean, pointed, and sharp, come under the 4th class, or *very tender mouthed.*†

From the preceding observations it is evident, that there exists between the bars and the chin that reciprocal conformity in shape which gives more or less sensibility to the mouth. There are horses, however, in which these two parts have not this relation, because there is a deficiency of feeling in either of them. But as the mouth-piece and the curb chain act together, the former on the bars, the latter on the chin or beard, the sensibility of one of these two parts prevents the horse from leaning on that which has not the same degree of sensibility; and the result of this counterpoising effect is, that the rider obtains a good *appuy.*‡

* There are also horses which, from a weakness in the limbs, bear very heavily on the hand, owing to the manner in which they throw themselves on the bit, endeavouring, as it were, thereby to supply their want of strength. Others again, which, from being too hot and mettlesome, bear heavier than might be expected from the good shape of their mouths. These horses, producing on the hand a similar effect as those belonging to the 2nd class, should be included in it.

† We meet occasionly with horses which, through a natural imperfection, have one bar higher than the other; a defect which, besides producing considerable irritation in their mouths, obliges them to be always turning their heads to that side which it inconveniences. Their number, however, is very limited, and they are comprised in the above class. There are others, especially among blood horses, which have a restless and uneasy movement of the head, or impatience of the action of the bit, that does not proceed from any defect in the mouth, but simply from the stiffness of their hocks. These horses should be suited with a very mild bit, as if it had to act on a very tender mouth; for if a bit of much restraining power were applied, the rider would not be able to keep a steady and firm seat, while the defect would go on increasing in the horse, and become more ruinous in its consequences. It follows, therefore, that although the causes which produce their effects in the rider's hand may not exist in the horse's mouth, a well applied bit will always contribute to lessen these natural or acquired defects, though it cannot be expected it will altogether remove them. I may, however, be told that the most efficacious means of success are to be found in a skilful and experienced hand. To grant this calls for no great effort of courtesy or common sense; but it still remains clear that if a horse be managed at the same time by *bad hand* and a *bad bit*, they become evils too great to be endured; and that, on the contrary, if a proper bit be applied, the horse will experience much less annoyance, and his rider more satisfaction. It must be allowed then, that as a horse is governed by the mouth as a ship by her rudder, that is the quarter to which the greatest attention should be directed in order to guard against danger.

‡ Some writers pretend to have found a new description of *very hard* and *very tender mouths* in those which are *too much* or *too little split*; but as in general the parts of a hard

Horses of this description are, therefore, to be considered as belonging to the 3rd. class, or of *a good appuy*. It only remains now to give here an idea of the natural causes which make horses carry their heads either too high or too low.

A horse, whose cheek bones are too narrow, and whose throat is too broad and muscular, being unable to lodge the latter in the former, as it does not afford sufficient room for that purpose, is naturally inclined to carry his head high, because the almost perpendicular position of the head is too violent for these horses, which belong to the 5th class, or *star-gazers*.

The causes which occasion a horse to carry his head too low, or to arm himself, are numerous; but the principal are to be found in a weakness of the cervical muscles, in having the neck either too long, or too low in the withers, and in a weakness of the forepart. Horses of this description belong to the 6th class, or *borers*.

DEFECTS CONTRACTED BY HORSES.

Through the imperfect Construction of the Bits in General Use.

Hitherto I have dwelt only on the natural causes which render the mouth defective, and give a false position to the horse's head. I shall now endeavour to show that in the greater number of horses these defects proceed from the imperfect construction of the bits.

The stress with which the horse leans on the bit creates a weight which should be counterbalanced by a resisting power of equal weight; if, therefore, to a *hard mouthed horse* that bears with the weight of *three*, a regular bit be applied which counterbalances with a resisting power but of *two*, it is evident that such a bit, from its insufficiency to control him, will only tend to harden the bars or chin, from the repeated efforts the rider will be obliged to make in order to restrain him, especially if the horse be ridden out of the riding school.

Upon this principle, if to a *good mouthed horse*, that bears with the weight of *two*, a bit be applied which has a restraining power but of *one*, a similar result to the above will in proportion arise from it.

mouth are naturally thick and fleshy, the lips are less split, and consequently this description of mouths cannot be ranked under any other class than the 2nd, to which they properly belong. The same may be said of the too much split mouths, which, from a contrary cause to the above, are comprised in the 4th class. There may be, however, some horses which, deviating from the natural order, may have the mouths too much split and be hard mouthed, and *vice versa*. For the 1st of these cases the cannons of the mouth-piece should be increased in thickness to $\frac{3}{4}$ of an inch; and for the 2nd case they may, on the contrary, be diminished, by leaving them only $\frac{1}{4}$ an inch in thickness. *(See page 31)*, which treats of the diameter of the cannons.

On the contrary, if to a horse that bears but with the weight of *two*, a bit be applied, the restraining power of which is of *three* or *four*, the effect produced by it will be so great, that it will render the mouth extremely tender, and the horse being unable to endure the power of the bit (the least movement of which will fret him), will end either by arming himself, bearing upon the hand, or carrying his head high with the view (each after its peculiar way, or according to his own temper,) of escaping every movement of the bridle.

If a bit with very long branches be applied to a horse that naturally places his head well, the animal although he may not shrink from the bit, will be forced to hold his head low, and, *vice versa*, if the branches be very short, to carry it high. Thus a horse that has a good mouth, and places his head well, may, from the inaccurate proportions of the bit, contract one or more of the defects of mouth and of position of the head above enumerated; and as hitherto no fixed rules have been established by which these proportions should be determined, I do not hesitate to assert, that there is not (until now) a bit to be found that observes them with the exactness required to produce the effect which the nature and construction of the horse's mouth demands. To the above defects two more, proceeding from the same cause, should be added; namely, *putting out the tongue*, and *gaping or opening the mouth*.

The first of these defects arises from the pressure to which the tongue is subjected by the whimsical shapes of the mouth-pieces in general use, the *libertics* or *portes* of which, instead of being according to the form of the tongue and of the rest of the mouth, are so constructed, that the tongue is either pinched between the porte, or pressed between the cannons of the mouth-piece and the bars of the mouth. Hence a horse, whose tongue is endued with a certain degree of sensibility, wishing to save it from the pressure of the mouth-piece, and obtain some relief, puts it out, or lets it hang on one side,* and not unfrequently he endeavours to free himself altogether from this insufferable annoyance by drawing it up above the mouth-piece, in doing which his mouth opens in a disagreeable manner.

* Some of the most celebrated writers on horsemanship, from whom, on account of their knowledge of the noble qualities of the horse, one might have expected a degree of kindness for this animal, amounting at least to an absence of cruelty in their means to correct these defects, recommended as the best remedy for those which let their tongues hang on one side a *muzzle* with small and sharp points of iron! and for those which loll it out *amputation* of such a part of the tongue as is thrust beyond the mouth!! (See Richard Berenger's History and Art of Horsemanship, vol. II. Part II, p. 204.) This advice is given under the plea, that the lolling out of the tongue when the bit sits justly and equally in the mouth proceeds from the tongue being naturally *too long*, than which nothing is more absurd; for it is an observation within the reach of every body, that if a horse thrusts out his tongue when he has the bit in his mouth, the moment he is unbridled, he ceases to do so, an evident proof that the evil is not in the disproportionate length of the tongue of the horse, but rather in the defective construction of the bit.

This second defect proceeds also from the extreme elevation of the portes of some mouth-pieces, which are most improperly made to act on the palate instead of the bars, and which on the least pull of the reins creates such excessive pain on the palate, that the horse is obliged to gape or open his mouth, than which nothing is more displeasing to the eye.*

To correct all the defects of the mouth and position of the head in horses of every description as well as those occasioned by the imperfect construction of the bits hitherto in use, which on one hand affect the safety and convenience of man, and, on the other, render the laborious condition of those useful and generous animals more hard and toilsome, I have sought to give to my bits such form and proportions as are calculated to produce that desirable result; and, in order to prevent any error in the choice and application of a proper bit, each of the six different bits will bear the number indicating the class of mouth to which it ought to be applied. By this means riders and drivers, instead of confining their object to the selection of the most handsome looking bits, will be enabled to choose those which are proved to be the best adapted to correct the faults of their horses, and preserve their mouths in a good condition; for every one knows, however ignorant he may be of the cause, whether his horse has a good mouth, a more or less hard, or a very tender one; and whether he carries his head high or low.

PRINCIPLES, APPLICATION, AND EFFECTS

Of the Bits, according to the different Mouths and Positions of the Head.

A bit is composed of four principal parts; namely, the *Branches*, the *Mouth-piece*, the *Curb-hooks*, and the *Curb-chain*.

THE BRANCHES are divided into two parts, the one, extending from A to B, called the cheek; the other, extending from A to C, called the leg.—*(See Plate, fig. 3.)*

* There is another defect, which, though it does not proceed directly from the imperfection of the bit, should be mentioned here, namely, *turning the head aside*. This arises from one of the bars having become more callous than the other, owing to some riders making greater use of one of the reins, or keeping them of unequal length, which naturally produces a greater degree of friction on one of the bars, and renders it more insensible than the other. Once the mouth in this state of inequality, the horse, wishing to avoid the impression of the mouth-piece on that bar which still preserves its sensibility, turns his head to that side; and the more the rider pulls the contrary way, the more the horse persists in his vice.—(See note †. page 22.)

As it is by means of the *branches* that all the other parts of the bit act, it may be said with propriety that the power of the bit resides chiefly in them, because they serve to equilibrate the *appuy*, or force of the horse's mouth, in the same manner as the *lever of a steelyard* serves to balance the weight of things; the effect of both being in direct proportion, as will be proved in the following manner.

The lever of the steelyard is divided into two arms, one of which is shorter than the other. *The branch* of the bit is divided also into two unequal parts, *the check* and *the leg*. *The arms of the lever* separate at the fulcrum on which they move to counterbalance the weight.—*The check and the leg of the branch* separate at the point on which the mouth-piece is fixed, and on which the branch produces its power. *The shorter arm* of the lever serves by means of the *hook* to support whatever is to be weighed.—*The check* of the branch serves to support the horse's *appuy* by means of the *curb-chain*. *The longest arm* of the lever counterpoises, by means of the moveable ball, the weight which the shortest arm supports, according as the moveable weight approaches towards, or recedes from, the fulcrum.—*The leg* of the branch restrains, by means of the support of the rider's hand, more or less, the horse's *appuy* on the curb-chain, according as the leg is more or less long.

The longer the lever, the greater the power it will balance with less weight. —*The longer the branches*, the greater the *appuy* they will restrain with less force. In proportion as the moveable weight of the steelyard is placed nearer or farther from the fulcrum, the longest arm of the lever will *rise* or *fall*.

In proportion as the legs of the branches are either long or short, the horse will carry his head either *high* or *low*.

Guided by this principle, I have, in order to preserve the *appuy* of a *good mouth* (which ought to serve as a basis for the others), given the check a length of 1 inch and $\frac{3}{8}$, to which $\frac{1}{8}$ more should be added, because the hook for the curb-chain being $\frac{1}{8}$ above, and the power proceeding from this last line, it is as if the check were 1 inch and a $\frac{1}{2}$ in length. This power of 1 inch and a $\frac{1}{2}$ in the check ought to be counterbalanced by a leg three times that length, and terminating on the *line of the banquet (see Plate, branch 3.)* Those proportions, which, from experience, I have felt to be necessary, contribute likewise to keep a horse's head in a good position. In progressive order I proceed from the *good mouths* to the *hard mouths;* to check the *appuy* of which, I give the check $\frac{3}{8}$ of an inch more than to the former, which will make it one inch and $\frac{7}{8}$; and I lengthen the leg in the same proportion as the preceeding *(see Plate, branch 2)*. I next pass to the *very hard mouthed*, for which, as the greatest power is required to restrain the impetuosity of their efforts, I further allow $\frac{3}{8}$ of an inch in addition to the length of the preceding check; so that it will be 2 inches and a $\frac{1}{4}$ long, lengthening the leg in the same proportion, and causing, moreover, its extremity

to project 1 inch and $\frac{5}{8}$ from the line of the banquet *(see Plate, branch* 1.*)*, in order that this part of the bit, beginning to act before it reaches the said line, may increase in power, in proportion as it has distance to traverse to the point where it ceases to act, which happens when the branch gets into a horizontal position; in which case the bit no longer governs, but acts upon the headstall only. From the *good mouths*, always taken as medium, I descend to the *very tender mouths*.—To form the branch suited to this kind of mouth, which should be made to bear on the bit, the length of the check should not exceed 1 inch, that is, it should be $\frac{3}{8}$ of an inch shorter than what is allowed for the good mouths; and the extremity of the leg should terminate $\frac{3}{8}$ of an inch behind the line of the banquet *(see Plate, branch* 4.*)*

I shall now proceed to determine the proportion of the branches, which ought to be used to correct the bad position of the head. In order to remove the defect of the horses denominated *star gazers*, the check should be 1 inch in length, and the leg more than one-half of what the fixed rule directs, that is to say, $4\frac{1}{2}$ times the length of the check *(see Plate, branch* 5.*)* Besides observing these proportions, it would be advisable, in order more effectually to obtain the desired result with this description of horses, to discontinue the use of the snaffle conjointly with the bit, because the snaffle, being felt at the angles of the mouth, compels the horse to be continually throwing up his head; and as it may be replaced with more advantage by reins fastened to the pelham eyes, the snaffle may be dispensed with altogether. For those horses that carry their heads low, or *borers*, a contrary course to the above should be pursued; that is to say, the check should be 2 inches and $\frac{1}{8}$ long, and the leg only one-half the given length, or in other words, $1\frac{1}{2}$ the length of the check—*(see Plate, branch* 6.*)* Finally, in order that the branches may freely produce their effect, the top eye of the check should be circular, otherwise the rider's hand would of necessity begin by defeating the power of the headstall, which, passing through that eye, serves to support the bit. To this general rule, however, an exception must be made in favour of branch No. 4, whose eye ought to be of an oblong square, because, being applied to a very tender mouth, its action should not be too sudden.

THE MOUTH-PIECE.—It is commonly believed that the force, or power of the bit, lies in the mouth-piece, according to its shape or form; that is to say, that when the mouth-piece, by the elevation of its porte, bears against the palate, it affords the rider a greater purchase over the horse; while in fact, it only tends to bruise the animal's mouth, and to compel him (technically speaking) *to force his rider's hand;* for, as I have already demonstrated, the power of the bit lies solely in the proportions of the branches, and by no means in the size of the porte of the mouth-piece, which ought to produce the effect of an axis gravitating on the bars, in order that, by its means, the branches may act on these only, and not against the palate, nor on the tongue as it happens with all mouth-pieces hitherto in use. This will be made more

evident by a reference to the common mouth-piece, * when it will be seen (bearing in mind the natural form and dimensions of the horse's mouth) that the shape of some is such as to act exclusively on the palate, seriously injuring it by the extreme elevation of the porte: others again have an improper bearing on the bars, and bruise them considerably, on account of the cannons of some of them being entirely horizontal, and the heels of the cannons of others being too far asunder, and ending in an angle. There are others of a semicircular shape, which, as they present no point of rest to gravitate directly on the bars, slip upon the outer part of the latter, producing an excessive pressure, and thereby rendering them liable to serious disorders; while others, owing to the smallness of the porte, act with similar violence on the tongue, which, from its broad and flat shape, gets squeezed between the cannons of the mouth-piece and the bars, and is thereby forced to take a position which is not natural to it: hence why the horse lolls it out, and gapes and makes those grimaces which deprive him of that natural grace and freedom of carriage so much sought after in this noble and useful, yet so cruelly used, race of animals.

With respect to the rollers, olives, twists, &c. &c. with which some of the mouth-pieces, are encumbered, I shall not stop to show how far they contribute to the destruction of horses' mouths, although such is the only result of those absurd inventions. Suffice it to say, that the severity or mildness of the mouth-piece depends entirely on that part of the cannons which acts on the bars being more or less thick; but it is essential that its form should be according to the shape of the mouth, in order that the tongue may enjoy its natural ease, and that neither the bars nor the palate may suffer any injury.

Convinced by experience of this truth, I have had a mouth-piece made, which, having nature for its basis, and conciliating the effects of the bridle with the art of horsemanship, obviates all the difficulties connected with this most essential part of the bit. This mouth-piece, of an improved form, and new by its rotatory movement of a quarter of a circle, which is the best adapted to the shape of the horse's mouth, is divided into three parts, namely, the cannons, the heels, and the arch for the tongue.

The Cannons are included in that round part which extends from 1 to 2 *(see Plate, mouth-piece* B.)

The Heels extend from 2 to 3 *(see Plate, mouth-piece* B.) and have an oblique direction, that they may act on the exterior part of the bars, and shield its interior border, which, on account of its being the most prominent, is also the most sensible, and the most exposed to serious and often irreparable

* The author, in his original work, has given a plate containing a variety of these mouth-pieces, in order to shew, in a clearer manner, how all of them injure the horse more or less; but as the candidates for the honour of these absurd inventions are rather numerous, and might consider themselves ill used by the author's omission of their no less hurtful mouth-pieces, we have thought proper to leave out the plate altogether, and give only the substance of the author's remarks.

injury. These heels which, from their particular shape, prevent the lips, when they are thick, from covering the bars, are only ¾ of an inch apart from each other, in order to prevent the exterior part of the bars from being injured when the mouth-piece, by the aid of the hand, slips too much on one side; for if they were too far asunder, their extremities would press on the centre of the bars, and thereby injure them.

The Arch for the tongue *(see Plate, mouth-piece* B 4 4 4,*)* is formed exteriorly after the shape of the palate, and interiorly after that of the tongue, and has the necessary width to afford the latter the room it naturally requires between the channel and the palate, so that, however thick it may be, it cannot be pinched or incommoded in the least; for as it has the liberty of freely spreading itself on the heels of the mouth-piece, it assumes its natural position, and the animal feels as easy as if he had not a particle of iron in his mouth. It should be here observed, that although horses may differ from each other in the qualities of the mouth, as the shape of the tongue never varies, the form I have given to the mouth-pieces of the six different bits is invariably the same for all horses, the only difference being in the more or less thickness of the heels, which is in proportion to the more or less sensibility of the bars on which alone they ought to act. *(See Plate, mouth-pieces* A. B. C.

All the above-mentioned improvements which I have given to my mouth-piece would, however, have been insufficient to the attainment of the end I have in view, had I not added to it the most essential of all, namely, the rotary movement of the quarter of a circle,* which it performs on the branches, so as to allow the mouth-piece to follow the direction of the tongue, and preserve always an horizontal position *(see Plate, fig. 3).* This movement possesses the following advantages: 1st. It enables the horse to keep the mouth-piece always in its proper place, independent of the branches, the slightest movement of the tongue sufficing to introduce it in its arch, and fix it in that position which is best suited to the former. 2d, The friction of the mouth-piece against the bars, occasioned by every pull of the bridle, and which, by a constant repetition, hardens them, is thereby almost entirely, if not altogether, done away with. 3d, Were a vicious horse to seize the bit, or one of its branches with his teeth, he may still be made to feel the bit, because the branches, acting independent of each other, and of the mouth-piece itself, the curb-chain may instantly be brought into play, and the horse under its subjection. Thus those fatal accidents, hitherto of daily occurrence which proceed from the rider or driver being unable to stop his horse on account of the action of the branches being suspended, are sure to be avoided, by means of the rotary movement given to the mouth-piece. 4th, It frees the tongue from all oppression, and the horse from the necessity of putting it out, or of drawing it over the mouth-piece, because its porte has sufficient

* It is quite indifferent as to the mechanical mode to be employed in effecting this movement, provided it is performed with exactness. The same observation will apply to the exterior shape of the branches, provided they observe the proportions described.

room to allow the tongue to move with ease, an advantage of which it would be deprived if the mouth-piece were without this movement; for in this case, however large the liberty or porte for the tongue may be, the latter cannot enjoy the former so long as the bit acts, as will more clearly appear from the following demonstration. When the horse's head is in its true position, it is almost perpendicular, and his tongue, therefore, is in a vertical direction, and parallel to the jaws, the same as the mouth-piece, which, so long as the bit remains inactive, forms another parallel line with the tongue; but which, on its being made to act, assumes an oblique or diagonal direction. In the former case the tongue cannot at all enjoy the liberty or porte intended for it; and in the latter only a part of it. It follows, therefore, that when the mouth-piece has not this rotatory movement of a quarter of a circle, but remains fixed to the branches, or has any other movement different from the one above described, the tongue cannot enter the space allowed for it in the mouth-piece, except when the bit *goes back*, in which case it no longer governs.

DEMONSTRATION.

A Line of the upper jaw.
B Line of the under jaw.
C The tongue.
D The bars.
E Position of the bit when not acted upon by the bridle.
F Direction which the bit takes when it produces its effect.
G Position which the bit assumes when it *goes back*, or no longer governs.
H Circle described by the mouth-piece when it is immoveably fixed to the branches.

It is evident, therefore, that the tongue, from its shape and vertical direction, requires that the liberty or porte intended for it should surround it horizontally, besides containing sufficient room for its being lodged with ease. I shall now proceed to describe the thickness which the mouth-pieces for the different bits I exhibit ought to have.

For mouths of the 1st. and 2nd. classes the *cannons* of the mouth-piece should have a diameter of $\frac{1}{2}$ an inch. *(see Plate, mouth-piece* A.*)* For mouths of the 3rd, 5th, and 6th classes $\frac{5}{8}$ of an inch *(see Plate, mouth-piece* B*)*; and for those of the 4th class $\frac{7}{4}$ of an inch *(see Plate, mouth-piece* C*)*. My reason for this difference in the diameter of the cannons is, as I have already observed, that the bit, acting on the bars, its effect will be either milder or severer in proportion as its mouth-piece is more or less thick. It should be here observed, that for those horses which have one bar duller than the other, the cannon of the mouth-piece which is to act on the defective bar should have a diameter of $\frac{1}{2}$ an inch; and the other cannon, which is to rest on that which still preserves its sensibility, $\frac{7}{8}$ of an inch. The result of this will be an equalization of the pressure against the bars, and consequently a right position of the head in the animal. For those horses which have one

bar higher than the other, the cannon for the lower bar should have a diameter of $\frac{5}{8}$ of an inch; and for the higher bar $\frac{7}{8}$ of an inch, with this difference, that the former should be so constructed as to be under the line of the latter, in order that they may both have an united action on the bars, and thus obviate their inequality.

THE CURB-HOOKS, of which that on the off-side branch is called the S, and that on the near side the hook, should be adapted to the form of the upper part of the beard or chin on which they ought to lie. Their length should be measured by the distance between the point where they gravitate in the eye of the cheek, and the centre of the cannon of the mouth-piece, so that the curb-chain may be always on the chin. Thus each class of bits should have hooks of a different size, according to the length of the cheek; that is to say, those belonging to the branches, No. 3, ought to be 1 inch and $\frac{7}{8}$ in length; and all the others longer or shorter according to their cheeks.

THE CURB-CHAINS.—The proportions of the curb-chain ought to bear an equal relation to all the other parts of the bit. Thus for *very hard mouths*, or 1st class, the curb-chain is composed of simple enchained links, the bars of which are angular, that they may produce the required effect.

For *hard mouths*, or 2nd class, the curb-chain is of the same form as the preceding, but made of less keen links, that its effect may not be so powerful.

For *good mouths*, or 3rd class, the links are round, interwoven, and of a regular width.

For *very tender mouths*, or 4th class, as the curb-chain has to act on the most sensible chin, it is made wide, with interwoven links, in order that the horse may bear upon the bit without shrinking from or being hurt by it. An *elastic curb-chain*, however, such as I have provided, will be preferable for this description of mouths. With it the horse will, on all occasions, feel the impression or *appuy* of the bit by degrees, never suddenly; and the effect, therefore, will be milder and more supportable.*

For the *star gazers*, or 5th class, the curb-chain is of the same proportions as that for the 3rd class, in order that the horse, which has been hurt in the chin, may not throw up his head, or carry it high; and that he which does so from a natural defect, may yield to the power arising from the length of the legs of the bit without being worried by the curb-chain, which is of a mild nature.

For *borers*, or 6th class, the curb-chain is composed similarly to that for those of the 2nd class, in order to prevent the horse from leaning too much on the bit.

* I shall recommend for colts of every description the use of these elastic curb-chains, with its bit No. 4, as the most suitable to form a good mouth, hinder from the beginning his contracting a too strong *appuy*, preserve the good qualities of the naturally good mouthed, and prevent the hard mouthed from having this defect prematurely increased.

The foregoing rules for the proportions and application of the bit prove, in the clearest manner, that the parts of which it is composed preserve such a connection with each other, that were any of them to be altered, the same result could not be expected, as a union of the whole is calculated to produce. Two changes, however, may be effected, from which advantage may be derived. 1st. When a horse's bars are fleshy, and the chin sharp and thin skinned, the thinner mouth-piece A should be used with the curb-chain No. 4, which is the mildest. 2ndly. When, on the contrary, he has sharp bars and fleshy chin, he ought to have the thickest mouth-piece C and the curb-chain No. 2, which is strong.

ADVANTAGES OF THIS SYSTEM OF BITTING FOR HARNESS HORSES.

The particular action of either rein is meant to indicate to the horse the direction he should take; but this action is by no means distinctly marked with the common bit, as owing to the branches and mouth-piece of it being joined together and forming a single piece, the movement of one of the reins is sure to bring the whole of the bit into action; and it is only by violent and repeated pulling of the reins, always injurious to the mouth of the animals, that these take the required direction.

In my system, the movement given to the mouth-piece produces that independent action of the branches, which at once indicates to the animal the direction he is to take, as well as all the other actions required of him to perform, without any exertion on the part of the driver. Nor is this movement less essential and beneficial to the horses themselves, as it serves to protect both their tongues and palates from all injury; an advantage that will vainly be sought for in any of the mouth-pieces hitherto in use, which, on account of the bearing rein leaving scarcely any action to the bit, remain almost always parallel to the tongue, and produce the pressure before-mentioned. Lastly, as the principal object of my bits is to bring all horses to the same *appuy*, whatever be the difference of their mouths, as those of the 3rd class or good mouthed, little or no time will be lost in bitting them; and the driver will not be under the necessity of constantly working with the reins in order to effect that equalization which is so indispensable to keep the horses together, which will thereby be enabled to observe the strictest union in their paces, and obey with readiness the impression of the driver's hand.

APPLICATION OF THE PRECEDING SYSTEM OF BITTING HORSES FOR THE CAVALRY.

The rigorous uniformity required in the evolutions of the cavalry demand that the horses should be so bitted as to produce, on the hand of the horseman, a regular and uniform *appuy*, no matter how different soever may be the qualities of mouth in their animals; for so long as the former are masters of the latter, they will manœuvre freely, execute their movements with precision, and act more effectively on the field of battle.

As the great object of my bits is to furnish horsemen the means of obtaining this uniformity of *appuy*, with the preservation of the horses' mouths, the cavalry would derive more than one advantage from their adoption. In most of the regiments a great number of horses, which, though young and sound in their limbs, have become unfit for service, on account of their having lost all feeling of the mouth, are annually set aside. This can be attributed only to the imperfection of the bits, for were these constructed upon such principles as I have above explained, the injury to which the animal would be liable from the unskilful hand of a horseman would be greatly lessened. Moreover, I am fully convinced, that however clumsy a trooper might be in the use of the bridle, if, when he came to adjust the reins, he saw that the horse would not bear a heavy hand, but that he obeyed the least indication of the bridle, he would quickly renounce having recourse to violent aids, which are always destructive to the animal.

According to the manner in which I have classed the six different difficulties that oppose themselves to the suitable bitting of horses, each squadron of cavalry may have a sufficient number of bits in store for each class of mouths, after the following calculation:

For every 100 *horses.*	*Width of the Mouth-pieces.*				Total.
	$4\frac{1}{4}$	$4\frac{1}{2}$	$4\frac{3}{4}$	5-inch	
5 *Bits of No.* 1	0	2	2	1	5
45 — — 2	1	15	25	4	45
20 — — 3	6	12	2	0	20
8 — — 4	5	3	0	0	8
12 — — 5	2	4	6	0	12
10 — — 6	1	4	5	0	10
100	15	40	40	5	100

When once a regiment of cavalry are furnished with their complement of bits, agreeable to the above calculation, besides the advantages already indicated, a great facility will be afforded for the exact distribution of the bridles, and for the correct application of the six different bits, as each of those bears the number of the class of mouth to which it ought to be applied.

DESCRIPTION OF A BIT TO ENABLE HORSES TO FEED WITHOUT BEING UNBRIDLED.

Every military man, who is acquainted with the cavalry service, will easily agree as to the utility of a bit that shall allow a horse to feed without the necessity of being unbridled. Indeed it is not only the life of one or a few individuals, but often the result of a whole campaign, that is risked by the loss of a few minutes of time, though in the performance of indispensible operations. Nothing can be more fatal than a surprise when the horse is unbridled, and nothing more distressing than the alternative of keeping the animal unfed or unrefreshed when he finds himself exhausted by the toils he has undergone either in the field of battle, or in rapid marches, or a retreat. Moreover, as the moral force of a dragoon is found to sink in proportion as he sees the physical strength of his horse failing, no means ought to be neglected to facilitate an operation as essentially indispensible for the preservation of the animal, as for the existance of the horseman.

The rotary movement which my mouth piece performs on the branches, by leaving the action of the tongue free and unmolested, allows the horse to chew and swallow his food with as much ease as if he had not a particle of iron in his mouth. But as the length of the branches reaching beyond the lips would prevent the latter from taking up the food from the nose-bag or the ground, I was obliged to have recourse to a simple mechanism, by means of which the branches fold up, and the object attained, with the advantage of enabling the dragoon to prepare his animal for feeding in one instant, and lose as little time in getting him ready for the march; and if his situation is so critical as to require his remaining mounted while the horse was feeding, all he would have to do would be to loosen the nose-band, fold the branches, and fasten to the headstall the nose-bag containing the food, which would only occupy him a minute, when he might instantly mount, and be ready to move on; and should he then find it necessary to do so, he would only have to extend his right hand, and pull the running knot of the cord that supports the nose-bag on that side, in order to allow the horse to breathe more freely during the time required by the occasion.

This humane attention to the support and nourishment of the horse will be amply repaid by his enduring with strength and spirit toils under which he would otherwise sink, and expose his rider to a similar fate.

DIRECTIONS FOR ADJUSTING THE BIT IN THE HORSE'S MOUTH

So that all its Parts may act in unison, and with precision.

It has already been observed that the mouth-piece is the axis that gravitates on the *bars*, and on which the branches revolve, causing the curb-chain to produce the required effect, both on the chin and on the bars. The pressure it generates on both compels the horse to moderate his exertions, and yield to the rider's will. But it should be borne in mind, that when the curb-chain is too loose, the reciprocal pressure cannot be effected, and the branches *go back*, because finding no resistance in the curb-chain, the effect of the cannons on the bars is defeated, and the rider or driver is therefore obliged, in order to bring the horse under his subjection, to make great exertions, which often prove unavailing, when the most serious accidents may ensue. As it is therefore upon the adjusting of the curb-chain properly that the action of the bit will be either null or effective, I recommend the strictest attention in observing the following rules. 1st. The bit ought to be of the exact width of the horse's mouth, to prevent its slipping either to the right or left, and the heels of the mouth-piece from hurting or pressing more on one bar than on the other. 2ndly. Its proper place in the mouth is about $\frac{1}{2}$ an inch beyond the tusks of the lower jaw. 3rdly. The curb-chain ought always to sit exactly on the beard or chin, and be adjusted in the following manner:

For *hard mouthed* horses it should be more tight than loose.

For *good mouthed* horses, *star gazers*, and *borers*, neither too tight nor too loose.

For *very tender mouthed* horses, rather loose than tight.

BRIEF DIRECTIONS

For acquiring a good Bridle Hand, and assisting a Horse in his natural Paces, written especially for those Persons who have no leisure to learn in the Riding School.

The reins of the bridle ought always to be of an equal length, and held in the left hand.

To make a horse go at a walking pace, the hand should be lowered ever so little, the rider at the same time pressing against him with his legs; the movement of his body following that of the horse, as he advances with the

same kind of motion as a person makes who, after stopping, recommences walking. Great care should, however, be observed in making these three signs or aids imperceptibly, gently, and at once.

To make the horse pass from a walk to a trot those aids must again be had recourse to; and for making him pass from a trot to a gallop, the horse should be brought in, in order to raise and support his forepart; and instead of pressing against him equally with both legs, he ought to be made to feel more pressure from the leg opposite to the side on which he is required to gallop. If, when the horse is stopped, the rider wishes to set off at a trot, he must give double effect to his own movements or aids; and for the gallop they must be made with three times the energy required to make him go at a walking pace, and always with a mildness or vigour proportioned to the more or less sensibility of the horse.

As soon as the animal has obeyed the rider's command, the latter should throw back his body a little, and place his hand in a suitable position.* To stop or moderate a horse's pace, the rider should throw his body more or less back, his hand following the movement of the body with the same precision as I have already stated.

Finally, whenever the rider wishes to make a horse proceed in any particular direction, he should signify it to him by the movement of his body; for instance, if he wishes to take the right, he should turn his body to that side, without leaning; and the bridle hand should follow that movement. By this means the horse will follow the direction he is to take without hesitation, and without being fatigued, or having his mouth hurt.

The great skill of a horseman in the management of the bridle hand consists in not making the bit to be felt too severely, and in moderating its effect by the mildness and pliability of his hand; or, in other words, in not employing more strength than the horse actually requires, and in checking or yielding by degrees, but never suddenly.

* For a horse that places his head well, the hand ought to be about three inches above the pummel of the saddle, and at an equal distance from the body. For star-gazers, the hand should be lower; and for borers it should be raised higher.

THE FOLLOWING LETTERS, IN APPROBATION OF THIS NEW METHOD OF

BITTING HORSES,

HAVE BEEN ADDRESSED TO MR. SEGUNDO.

From Major-General Sir GEORGE QUENTIN, *Equerry to the King.*

SIR,

I beg leave to return your book, which I have perused with attention, and shall have much pleasure in recommending the improvements you propose. I have also tried your different bits on different horses, and have found them answer all the purposes that are intended.

I have the honour to be, etc.,

G. QUENTIN, *Major-Gen.*

From Lieutenant-Colonel TAYLOR, *Commandant of the Cavalry Riding Establishment, and Captain* MEYER, *Instructor of the Cavalry, St. John's Wood Barracks.*

SIR,

Having perused your Treatise on the principles for the construction of a bit, so as to produce the best effect with the least chance of injury, and having seen the application of those principles exemplified in the bits you shewed us at the riding school, of which we have made trial, we beg to express our perfect acquiescence in the justice of the principle, and approbation of the ingenious application of the merits of the bits you propose for adoption.

We think the plan of a system of bits for a regiment very good, and likely to be of great utility if it should be carried into effect.

With regard to the feeding bit to enable cavalry to feed at an out-post, we think it very ingenious, and that it would answer the purpose; but beg to observe, that the durability of the joint and spring must be matter of experience, and after a sufficient trial of that you have sent us, we will acquaint you with the result.

We have the honour to be, etc.,

W. TAYLOR, *Lieut.-Col.* and A. MEYER, *Capt.*

From General Count de BEAUMONT, *Peer of France, formerly a Pupil of the Riding School at Versailles.*

SIR,

I have read your work on the bitting of horses with much attention and interest, and find it in every respect deserving of being laid before the Minister at War; nor am I at all surprised, that a government, who is always anxious to encourage whatever promises to be of national utility, should have granted a patent for your invention. For my own part I can only assure you, that I shall particularly recommend it to all the cavalry generals as an improvement, the introduction of which into our cavalry corps would be a most important benefit to them.

I have the honor to be, etc.,

The COUNT DE BEAUMONT.

From his Grace the Duke de POLIGNAC, *Grand Equerry of France, to the Chevalier* BENEZE, *by whom Mr.* SEGUNDO'S *work was presented to his Grace.*

SIR,

I have carefully perused the work you have had the goodness to favour me with, in which Mr. Segundo, the author, has with so much knowledge and precision explained what appears to be the best method for bitting horses.

I have no doubt that the publication of this work would ensure it the most complete success, especially among the troops and schools of cavalry, who would be most particularly interested in appreciating and following the principles laid down in Mr. Segundo's method.

I have the honour to be, etc.,

THE DUKE DE POLIGNAC.

From Baron de MORELL, *Colonel and Commandment of the Royal School of Cavalry of Saumur.*

SIR,

Enclosed you will find the resumé of theopinion of the eqerries of the royal school of cavalry on your ingenious method for bitting horses.

I regret I have not sent it sooner, but the time has been spent in making fresh trials, and collecting the various opinions of those gentlemen.

We have sent a copy of the resumé to the Editor of the *Journal des Haras*, requesting its insertion in the next number of his journal.

I have constantly made use of the bits which you were so good as to leave with me, and I am every day more satisfied with them.

Accept the assurance of the distinguished sentiments of admiration, with which I remain, etc.

BARON DE MORELL.

From the Journal des Haras, *des* Chases, *et de* Courses *des* Chevaux.

We have announced in various numbers of this journal, and especially in volume III. p. 155, the new system of BITS, of which Mr. Segundo is the inventor; but in bestowing on this discovery the praises it seemed to us entitled to, and the favourable opinion which some of the most enlightened connoisseurs of France and England had expressed of them, we declared at the same time our intention to wait the decision of the officers and equerries of the royal school of Saumur before we took upon ourselves to recommend to our numerous readers the adoption of these new bits.

This mistrust in ourselves arose from the great importance of this step in the equestrian science. The improvement announced was indeed immense, since it afforded to the various conformation of horses' mouths the advantage of having a mouth-piece suitable to the different sensibility of each; and since it moreover removed the inconvenience resulting from the bits hitherto in use, inconvenience the more serious, as not only the utility and preservation of horses, but the riders' existence, depend upon the proper mechanism of the bits. Our readers, therefore, will not be surprised, if, notwithstanding the assurance in favour of Mr. Segundo's bits, which we daily received from a great number of distinguished amateurs, and notwithstanding the favourable opinion we ourselves entertained of their merits, we still wished to have our judgment supported by the decision of the first cavalry establishment of Europe. It was in the expectation of the result of the trials of the bits by the officers and equerries of the school of Saumur (trials which we advised Mr. Segundo to provoke), that we left unanswered the numerous questions addressed to us on the merit of these new bits by a great number of our readers.

Mr. Segundo's system of bitting horses, submitted to a special commission appointed by General Marquis Oudinot, commandant of the royal cavalry school of Saumur, has been the object of repeated trials. This commission has done us the honour of addressing to us the result of their labours and opinion. We hasten to communicate *verbatim* their report to our readers, and, thus strengthened by their testimonies, we hesitate no longer in joining most of the foreign journals to recommend the adoption of Mr. Segundo's bits, thoroughly convinced of the numerous advantages, and evident perfections they possess over all others.

For the benefit of those readers who have not seen a plan of Mr. Segundo's method of bitting horses, we shall present them with a plate of the six different bits of his system, in which they are represented half their original dimensions.

REPORT.

"In giving an account, in your number of June last, of Mr. Segundo's new method of bitting horses, you expressed a wish to know the opinion of the equerries of the royal school of cavalry, previous to your giving a public judgment on their merits. Various imperfect trials afforded some observations, the result of which we sent to you accordingly; and as all the advantages of this system could not be fairly prized, Mr. Segundo, desirous of establishing them, made lately a journey to Saumur, and having presented us with perfect bits, invited us to the trials, and we send you the following reflections elicited during these new examinations.

"The want of exactitude in the effects of the bits hitherto in use, and their inefficacy to master certain horses, caused them to be looked upon as insufficient instruments of sway, especially when used by those who could not rely upon their practical talent of equitation for the want of those qualities.

"In order to improve the bit, it was necessary to concentrate its effects upon that part of the horse's mouth which is the most susceptible of receiving an impression; that is on the *bars*, and diminish them on that which ought only to furnish a point of support, the chin. Such indeed is the end which Mr. Segundo had in view, and he has succeeded, partly by causing the porte of the mouth-piece to remain parallel to the tongue, and partly by causing the branches to move upon the ends of the mouth-piece. A comparative examination of the new bit with the old ones will show what I have advanced.

"In all the bits hitherto in use, the porte of the mouth-piece is parallel to the branches, so that it presses on the tongue, which cannot enjoy the space afforded by the porte, except when the bit *goes back*, and no longer governs, when the curb-chain compresses the chin, and the cannons of the mouth-piece reach the bars. The effect, then, is on the chin and on the tongue previous to the bit being felt on the bars, so that there is a progression in its manner of acting; but this progression defeats the intensity of that effect which the rider wishes to obtain.

"With Mr. Segundo's bits, on the contrary, the action on the bars begins from the moment when the branches are brought into play, so that all the effect which in other bits would spend itself on the tongue and on the chin, in the new bit it immediately reaches the bars. Now, as this last part of the horse's mouth is the most sensible, there results a more lively impression; and above all the result of the hand is more exact, for it does not require any great tension of the curb-chain before the cannons of the mouth-piece reach the bars on which they alone gravitate: hence the great inconvenience of former bits is avoided, viz., that of acting on the chin, and of producing two different and contrary sensations on the horse, which astonish and exasperate him, forcing him to irregular and dangerous movements; and, therefore, we must conclude that Mr. Segundo's bit is more powerful than the common ones, and that the effects of it are also more exact.

"From the preceeding observations, there follows that horsemen will derive from Mr. Segundo's bit the most incontestable advantages.

"The more powerful is a bit, the more judgment it requires in the horseman, but as nothing irritates so much the sensibility of the horse's mouth than a continual action upon it, it is to be hoped that this quality will be better preserved by the use of this new bit; for a horseman, instead of supporting himself by the bridle, at the expense of the horse's mouth, will see the necessity of finding the means of support in his own *aplomb*, or equilibrium. With this bit we shall see no longer horses running away with their riders, or the latter deprived of the means of arresting their headlong career. In fine, if employed by a skilful horseman, the new bit will instantly produce the horse's obedience, and all other riders will find it in the means of control.

"The cavalry will doubtless lose no time in adopting Mr. Segundo's bits; for they especially will reap the advantages resulting from them. Generally speaking troop horses are wanting in susceptibility; and the horseman should obtain a prompt and exact obedience, always in accordance with the rapidity of execution required in simultaneous movements.

"To sum up, among the numerous essays made for the improvement of bridle-bits, those presented by Mr. Segundo appear to us to merit the consideration of every horseman; and the practical use of them proves that the improvements made by him are far above all others, and entirely satisfactory.

"For the Equeries of the Royal School of Cavalry of Saumur, the Commandant Equerry.

"*Saumur.*" "CORDIER."

Extract from the Journal des Haras.

"We insert with pleasure the following letter from the pen of M. de Champagny, a cavalry officer, author of several works on manege, respecting Mr. Segundo's system of bitting horses, simply remarking that not only we fully concur in that gentleman's opinion, having ourselves been witness to the efficacy of those bits, but that, knowing how extensively they are used in the cavalry corps of the Northern Powers, we wish to impress on our cavalry chiefs the necessity of their general adoption, in order to render useful a multitude of horses which, bitted in the usual way, are altogether unfit for active service.

"EDITOR."

To the EDITOR *of the Journal des Haras.*

SIR,

At a time when the most active preparations for war are making, I think it my duty as a Frenchman, and a cavalry officer, to recall through the medium of your journal (which is the best organ we possess of the hippic science) the attention of the government to the ingenious invention of Mr. Segundo, who has succeeded in obtaining for horsemen the means of rendering themselves complete masters of their horses without the least injury to the latter, or impeding their movements, so frequently paralysed by the bits hitherto known.

Sharing in the opinion expressed by some of the most celebrated equestrians on the insufficiency of the common bits, and having afterwards read Mr. Segundo's Treatise, I submitted his bits to the test of experience on my own horses, and those of many of my friends; and the great success by which those trials were crowned left me no room to doubt their efficacy. I can specially mention a trial I made with bit No. 1. on an English stallion, which I had hitherto been unable to master, whenever he became inclined to run away; and I have great satisfaction in stating, that not only I succeeded in bringing him under my subjection, but that though I sought to drive him into paces which rendered him entirely unmanageable with the common bits, I found him as docile as a manege horse, and can now ride him with perfect ease and safety.

In a journey I made lately to Prussia and to Poland, I saw in those countries the bits of Mr. Segundo, used with the greatest success by the cleverest equestrians; and many chiefs of light cavalry would use no others for their Turkish and Arabian horses. Several corps have also adopted a certain number of these bits per squadron;

and from what I there saw, I can affirm that Mr. Segundo's method of bitting horses is becoming very general among our northern neighbours, thereby proving that this invention will not have that ephemeral existence which has attended so many others; for the more it is known, the more it will be appreciated.

In our country, too, the marked approbation it has elicited from so many distinguished equestrians, confirm the opinion entertained of it by our neighbours; and it was with real pleasure I read in one of your preceding numbers the report made by the equerries of the royal school of Saumur. It is there we see that after a mature examination of the merits of Mr. Segundo's bits, and the most vigorous trials made on horses of every description, these enlightened professors, guided by experience and a sense of justice, conclude by saying, "The cavalry will doubtless adopt the bits in question; for it is they in particular who will derive incalculable advantages from their use."

A decision by such judges should be conclusive; I shall therefore only add, that I have been led to reproduce facts already so well known, in the hope that our cavalry corps may turn them to their advantage, and ultimately to that of their country.

I remain, &c.

JULES CLERION DE CHAMPAGNY.

Report made by a Commission of Cavalry Generals *to the Marechal Duke of* Dalmatia, *Minister at War.*

Monsieur le Marechal,

The commission of cavalry, agreeable to your commands, have carefully examined a new system of bridle bits, invented by M. de Segundo.

They have taken into consideration a circumstantial, well digested, and highly favourable report given by the equerries of Saumur on several trials made by them with these new bits in the royal school of cavalry.

They have commissioned three of their members to repair to the military school, in order to have these bits tried in the *Champ de Mars* on four of the most unmanageable and violent temper troop horses to be found there, recommending the use of every means for strictly ascertaining the real power of these bits.

They accordingly have observed, that this new bit has an immediate action on the horse's bars, on the branches of the bit being brought into play by the horseman, and consequently that its effect is prompt, lively, and certain. It differs in that respect from the ordinary bits, the action of which being constantly exercised either on the tongue, the lips, or the palate, contradicts, exasperates, and hardens the horse's mouth, especially when the young horseman contracts the habit of seeking his support or *appuy* for a position on the bridle.

The commission therefore think that the introduction of this new system of bitting in the cavalry offers advantages which an attentive and continued experience will render more apparent; and they are further of opinion, that it would be proper to furnish each regiment of cavalry with twelve bits of the presented model of the three different dimensions, and to order the colonels of regiments to cause the instructing

captains to adhere to the suggested experience, and to submit within a given time their observations, and the result of their trials on troop horses, which may offer every variety of temper and structure of mouth.

All these reports being addressed to us by the colonels or inspector-generals, it will be easy to determine with certainty, and definitively, to generalize in the cavalry, the use of M. de Segundo's bits.

Such, M. le Marechal, is the unanimous opinion of the cavalry generals composing the commission.

The President of the Commission, Lieutenant-General,

The DUKE DE VALMY.

From Lieutenant-General the Duke de VALMY, *Peer of France, President of the Commission of Cavalry.*

SIR,

In answer to your letter, which I have sent to the secretary of the commission of cavalry, I beg to inform you that, on an investigation of the minutes taken by the said commission, the bits of your system, with which the trials were made in the military school in the *Champ de Mars*, on troop horses, and in presence of the members of the commission, presided by myself, are the same you describe. They were sent to the commission by the Minister at War himself, and adopted by the unanimous suffrage of the commission.

This will suffice, sir, to prove the identity of the bits presented by you, and employed in the trials which have proved so satisfactory to the members of the commission, and the result of which seems to them to offer incalculable advantages to the cavalry.

Accept, sir, the assurance of the profound consideration with which I remain, etc

The DUKE DE VALMY.

From Colonel EDWARD SCHEPELER, *a Prussian, in active Service at Aix-la-Chapelle.*

SIR,

I profit by the kindness of a friend to forward to you these few lines, and convey my wish to become connected with the inventor of so important an object as the bridle bits he has brought before the public. You have rendered, sir, a real service to humanity, for while your invention will be the means of saving the lives of many of our fellow-creatures, it will be of equal service to horses, by removing the cause of the irritation produced by the bits hitherto in use.

I have not limited myself merely to reading your Treatise, but have made a particular study of it; and my German translation and notes will shew you how well I appreciate your interesting labours.

In the hope of shortly enjoying the pleasure of your acquaintance, I remain, etc.

EDWARD SCHEPELER.

From the Viscount D'AURE, *Master of the Royal School at Versailles.*

SIR,

After having read your work relative to the method of bitting horses, I decided on making a trial of your bits, and have great pleasure in acknowledging myself perfectly satisfied with the result.

The classification you have made of the mouth-pieces best adapted to remedy the defects to be contended with in the horse, displays that skill and profound knowledge of your subject which could only result from an unwearied spirit of investigation and experiment; and I again repeat my conviction, that your method may be successfully employed with every description of horses.

Accept the assurance of my high esteem,

VISCOUNT D'AURE.

From Mons. AUBERT, *one of the principle Riding Masters of Paris.*

SIR,

I have read your methodical explanation of your new bits with the greatest attention, and have remarked throughout your work an intimate knowledge both of the anatomy and organization of horses' mouths, and of the effects produced on them by all the bits hitherto in use. Struck by your enlightened theory, yet naturally on my guard against innovation, I determined to ascertain what *real* advantages might be derived from your invention, and accordingly submitted it to the proof by trying it on a great number of horses of all descriptions; and the result of my experiments enables me candidly and unhesitatingly to acknowledge, that your system of bitting horses, besides in no way injuring the most sensible part of the mouth, renders the animal more obedient to the hand, gives a more steady and graceful carriage to his head, and, in a word, makes him more pleasant and agreeable than I have ever found him with any other bit I have made use of.

As your invention is one conceived and executed with a view to general utility, and has already been honoured by the sanction of amateurs of the highest rank and professors of the first repute, I should conceive I had not done you justice were I not to declare how cordially I unite in opinion with them.—Accept, etc.

AUBERT.

From Mr. KUNTZMAN, *Riding Master to the Pupils of the Royal Staff at Paris.*

SIR,

I have read your manuscript with all the attention due to the result of your profound observations on a subject so interesting, and which contributes to the preservation of an animal so valuable as the horse. I have a great pleasure in assuring you, that after the repeated trials I have made of your bits, particularly on some very untractable horses, I am thoroughly convinced that your new method of bitting horses will be as welcome to gentlemen amateurs as to the professors themselves.—I have the honor to be, etc.

KUNTZMAN.

From Mons. PELLIER, *first Riding Master of the Royal School of Paris.*

SIR,

You have afforded me a real pleasure in favouring me with a perusal of your work on the bitting of horses. The trial you have had the goodness to allow me to make of your bits renders me anxious to direct the attention of amateurs and riding masters to a work of sufficient importance to create a hope that it will be the means of ameliorating the condition of horses, too often the victims of the little care bestowed on that part of their equipment.

I would advise you to lose no time in publishing this interesting work, persuaded as I am that by such a step you will best succeed in making its great utility generally known.—I have the honor to be, etc.

C. PELLIER.

From Mons. FRANCONI, *Senior, Brevet Equerry to the King of the French.*

SIR,

The trial I have made on several horses of your new style of mouth-piece and the favourable results I have derived from it, prove to me the care you have taken to distinguish between the different descriptions of mouths to be found among those noble animals.

Your bits are calculated not only to give a great effect to an experienced hand, but to be also of great advantage to amateurs; and I have not the least doubt but the pains you have bestowed in bringing them to their present state of perfection will be done ample justice to. And it will afford me great satisfaction if this feeble testimony of my perfect admiration of your invention, which it justly merits, can be of any use to you. With best wishes for your success, I have the honour to be, etc.

FRANCONI, *Senior.*

From Mr. MATHIEU, *Riding Master of Finsbury Academy, London.*

SIR,

I have tried your bit on several of my horses, and the result was such as to leave no doubt on my mind of their being universally approved, as they unite what none others have hitherto accomplished, namely, *power to the horseman, and the greatest ease to the horse's mouth.*

I hope, sir, your invention will obtain the success it deserves, and have the honour to remain, etc.

J. MATHIEU.

Extract from the "Journal des Connaissance Usuelles."

"Having promised in our last number to treat on all things relating to the rearing and management of horses, we shall now fulfil our engagement by speaking of a very important part of the subject, namely, *on the bitting of horses*, which, if properly attended to, will considerably enhance the goodness and value of these useful animals.

"The numerous accidents which are daily occurring through a want of a sufficient power in the riders and drivers to control their horses afford abundant proof of the inefficacy of the bits hitherto in use, as well as of the necessity of a careful investigation of this matter. To judge from the great number of bridle bits, of various shapes, which have from time to time been brought forward, this necessity has been long felt; but as those inventions were either the result of *chance, or of caprice*, they have not answered the object which they professed to accomplish.

"Mr. Segundo, a skilful equestrian, who has devoted many years to the study of this branch of horsemanship, adopting a more enlightened method, at once made the anatomy of horses' mouths his study, and the foundation of his new system. This led him to a simple classification of the different kinds of mouth, which he found consisted in four, namely three defective, and one good mouth; and as by means of the bit the defect of the false positions of the head in horses may also be corrected, he added two more classes to the former, making six in all, as follows:—

1st. Class.—Runaway horses, or very hard-mouthed.

2nd. ditto.—Hard-mouthed, or horses bearing heavily on the bit.

3rd. ditto.—Good-mouthed horses.

4th. ditto.—Very tender-mouthed horses.

5th. ditto.—Star-gazers, or horses that carry their heads too high.

6th. ditto.—Borers, or horses that place their heads close to their chests.

"Once these distinctions established, Mr. Segundo found it comparatively easy to adopt the kind of bit suitable to each of these classes; and it will be evident, that the 1st. class will require a considerably sharper bit than the 3rd class, and greatly more so than the 4th class; and as the branches of the bit *act on the principle of a lever*, by having those of the 1st. class longer, and inclining forwards from the vertical line, the purchase is naturally greater in proportion to the distance they have to ply; while, on the contrary, by those of the 4th. class being made considerably shorter, and inclining backwards from the vertical line, the bit will possess all the required mildness for this description of horses. With respect to the 5th. and 6th. classes the reasoning is equally simple; thus if the fulcrum or centre of the mouth-piece be placed high on the branches, the action of the bit will naturally be downwards, owing to the long leverage of the lower part of the branches; and if, on the contrary, it be placed low, its action will be upwards, on account of the increase of check and decrease of branch; and hence a remedy is provided for the defects of such horses as carry their heads either too high or too low.

"In order, however, to render these bits completely effective, it was necessary that their shape and proportions should conform both with the interior and exterior parts of the horses' mouths on which they are made to act; that is to say, with *the tongue, the bars, the lips, and the chin.* Mr. Segundo had observed, that all the mouth-pieces of the bits hitherto used not only allowed no room for the tongue, but that,

instead of lying horizontally, they remain parallel to that organ; so that if the horse should keep his tongue under the mouth-piece, the tongue covering the bars, the rider is obliged to use greater strength in order to produce an impression; and when he does so, the abruptness and violence of the action on the tongue, the bars, and the palate, goads and exasperates the animal: hence also the frequent lolling out of the tongue, hot mouth, and total loss of feeling in the latter. And if, on the other hand, the horse passes his tongue above the mouth-piece, the inconvenience is by no means lessened, as the friction it produces on the bars hardens them, while the horse finds himself greatly tortured by it. In Mr. Segundo's bits, on the contrary, the mouth-piece being made in strict conformity to the shape of the tongue, bars, palate, and lips, the first of these has full liberty, and is allowed to move without molestation, owing to the important improvement he has introduced of giving to his mouth-piece *a partial rotatory movement on the branches*, by which means its position is always horizontal to the tongue, while the canons of the mouth-piece can never be prevented from acting on the bars: and as the branches by that means act independently of each other, not only the aid to the horse is more marked, but if a horse were to sieze one of the branches with his teeth, he can at the same time be made to feel the power of the curb-chain.

"This brings us to this part of the bit which, in Mr. Segundo's system, bears the same analogy to the rest of his invention. Thus to a very hard mouthed horse he gives a very strong curb-chain, the links of which are made angular; and to each of the other classes others according to their respective qualities, that which he has provided for very tender mouthed horses being a novelty no less ingenious than useful; this is *a leather curb-chain*, which will render the action of the bit milder by yielding only gradually. Colts and horses that have a tender chin will be able to bear the bit with facility with this excellently contrived curb chain.

"Another of the improvements introduced by Mr. Segundo is that of a bit with folding branches, which, with the aid of his moving mouth-piece, allows a horse to feed while bridled with perfect ease. This is chiefly intended for the cavalry.

"From what we have stated above, it will plainly appear that Mr. Segundo's bits, being founded on a deep and intimate knowledge of the horse, accomplish in the most complete manner the object he had in view, and will be found adequate to meet every difficulty hitherto unsurmounted. In this we are borne out by the experience we have of them no less than by the numerous testimonials he has received from some of the most distinguished horsemen of various countries, among whom we may mention the late King of England, George IV. who gave the author permission to dedicate his work on the subject of his invention, to him, the Lieutenant-General Duke de Valmy, the Count Beaumont, the Duke of Polignac, Generals Oudinot, Sir George Quentin, the Viscount D'Aure and the Marquis de l'Aigle, Colonel Taylor and Captain Mayer of St. John's Wood Riding Establishment, the Prussian Colonel Schepeler, Messrs. Aubert, Kuntzman, Franconi, Mathieu, &c., &c. enlightened amateurs and professors of equitation. To the testimonials of these we may add those of the equerries of the Royal School of Saumur, who, at the express desire of the French government, made numerous trials of those bits, and stated their conviction of their utility, and of the advantages that would accrue to the cavalry from their adoption, as much on account of the precision they afford in the manœuvres as for the security they would give to the horsemen in the field by the facility with which they may stop their horses in full career; and, lastly, the no less flattering report made by a commission of cavalry

generals, under the presidency of the Lieutenant-General Duke de Valmy, who were appointed by Marechal Soult, Minister at War, for the purpose of making trial of Mr. Segundo's bits, and who, on witnessing their effects, urged the necessity of their adoption, and proposed that every cavalry corps should be furnished with a certain number of them preparatory to their general introduction.

"As the object of these bits is to bring all descriptions of defective horses to the same bearing on the bit as the good mouthed, we think proper to add, that we consider them highly calculated for carriage horses, as their effect being as instantaneous as it is just, they cannot fail to introduce the greatest uniformity in their movements. For such persons too as are employed in rearing horses, whether for saddle or harness, this is an invaluable invention, because it enables them to bring their young horses under the obedience of the bit without injuring the feeling of their mouths, and thereby render them more valuable.

"The limits of this Journal will not allow us to enter further into the merits of this important subject as treated by Mr. Segundo, we therefore refer our readers to the excellent work on the art of bitting horses, written by that gentleman; and we heartily recommend the use of these bits, in the full persuasion that they will give perfect satisfaction if a proper attention be paid to their application."

Appendix.

THE LORINERS' COMPANY.

This ancient and most honorable Guild is now the most numerous of all the City Companies, and amongst its Members, four past Lord Mayors besides several Sheriffs are conspicuous; the Court Meetings and most of its entertainments are held at the London Tavern, Bishopsgate Street, and the business of the Company is transacted at the Chamberlain's Court, Guildhall. Mr. T. Davies Sewell is the present Clerk, in succession to his Uncle, who was connected with the Company for nearly half-a-century.

EXTRACTS FROM CORPORATION RECORDS PRESERVED IN THE TOWN CLERK'S OFFICE, GUILDHALL.

Translation of Norman French Extract from Liber Custumarum, folio 48, 45 Henry III, 1245.

ORDINANCES OF THE LORINERS.

These are the Ordinances that the Makers of Lorinery of London have made by Common Consent of them all, and by the assent of Sir William Fitz Richard, then Mayor of London, and the rest of the Barons of the same City, for the improvement and relief of the Mystery and the honor of the City, and the abatement of all frauds and deceits; in the 45th year of the reign of King Henry, the Son of King John; that is to say, that none of the said Mystery shall forge or work any manner of Lorinery work by night, and that no work cast or founded shall be put into work because it is brittle and bad, and that no old Lorinery shall be renovated to resell unless it be that any chief man or lady of the land or good man of the City desire to have his old Lorinery renovated, or repaired, because it may seem to him of good pattern or useful.

Also that none of the said Mystery shall work on Saturday after none sounded and rung out at his parish church. Also that the feasts of our Lady, and Apostle days, and their virgils after None rung, and the weeks of Christmas, Easter, and Pentecost, and the other Feasts which are commanded by Holy Church to be kept, shall be observed as a Sunday.

Also that no one shall entice away any apprentice, or other hired servant during his term nor shall receive any apprentice for a less term than 10 years, and with 30 shillings at least, and shall charge the said apprentice to keep the Ordinances in this writing contained.

Also that no stranger who shall come to reside within the City shall forge or work any manner of Lorinery unless he belong to the Mystery, until he has given half a Mark to the Commonalty of London for his admission, and 2s. at least to the box, which 2s. shall be collected by the Wardens of the Mystery for the relief of the good Men of the Mystery who are in poverty, and shall then put himself in frank pledge and be charged to keep the said Ordinances.

Also that no foreign workman shall be received into the said Mystery until he shall have paid 2s. to the same box, and put himself in frank-pledge and agree to keep the said Ordinances, and to keep and maintain these Ordinances, four good men are elected by all the Commonalty of the said Mystery, who are sworn by the aforesaid Mayor and Barons of the City, that if any will do contrary to these Ordinances or will not keep them, the Wardens shall shew the same to the Mayor for the time being, and the Barons of the City, that they may be compelled to keep the Ordinances, and if any do contrary thereto, he shall pay half a Mark of Silver to the Commonalty of London for the trespass, and 2s. to the box aforesaid, and if he be so poor that he has not the wherewith to pay the half-Mark and the 2s., he shall forswear the Mystery for a year and a day.

Also it is commonly provided and granted by all those of the Mystery, and their apprentices and workmen, for themselves and those which shall come after them, that they shall give every year at Easter to the Mayor of London, an honest and honorable Bridle, so that the aforesaid Ordinances and provisions may be kept, maintained, and sustained by him, and the Barons of the City in form aforesaid.

All those of the said Mystery have sworn to maintain and keep these Ordinances aforesaid, and before the Mayor aforesaid, and the Barons of the City have granted them, and for full surety all the Masters of the Mystery and the Wardens have confirmed this writing with the imprint of their seals.

And one part of this writing shall remain in the Chamber of the City, and the other part with the Wardens of the Mystery.

These are the names of the Wardens of the Mystery aforesaid,—Roger Gernet, Roberd de Trippelawe, Richard le Counte, Richard de Chewelle.

Translation of Norman-French Extract, from Letter Book, D., Folio 195, 6 *Ed. II.* 1313.

Be it remembered that on Tuesday next, after the Annunciation of Our Lady in the year of the reign of King Edward, the son of King Edward the Sixth, the good men of the Mystery of Loriners came before Sir John de Gysors, Mayor of London, and forasmuch as the Wardens of the Mystery had departed this life, they had elected Wardens, to keep the Ordinances of the said Mystery, which are in a written Indenture (the one part whereof remains here in the chamber) more fully contained, that is to say, Simon the Loriner, John Michel, John Gay, Loriner, and Richard Rolf, Loriner, who were sworn to keep the articles of the Ordinances of the said mystery in all things so that the moneys which shall happen to be collected or received according to any of the Articles in the writing contained, they shall immediately distribute among the

most poor and suffering of the Mystery, without further delay, after they shall have received them.

Translation of Norman-French Extract from Letter Book folio H, 282, 16th July, 17 Richard II. 1393.

The 16th day of July, in the year of the reign of King Richard II. the 17th, came here the good men of the mystery of Loriners of London, and delivered to the Mayor and Aldermen, a certain Bill in these words :—

To the Honorable Sirs, the Mayor and Aldermen of the City of London, th Loriners dwelling in the said City pray that for the honesty of the said Mystery, and the profit of the common people, the Articles underwritten may be granted to them and enrolled to remain for all time : —First, that no forger of Lorinery shall forge any work by night, by reason of the deceit and falsity which might thereby be occasioned. Also that none of the said Mystery shall cause to be mended nor renovated any old Lorinery to re-sell, but that it shall be lawful for every one of the said Mystery to mend and renovate old work for the good people, who shall bring them to them for their own use, and not to expose any such for sale. Also that none of the said Mystery shall draw to himself any Apprentice or other servant, during his term of Apprenticeship or service. And if any one shall do contrary to any of the Articles aforesaid, and thereof shall be convicted before the Mayor and Aldermen, he shall pay for every time half-a-Mark to the Chamber, and forty pence to the Mystery. Also that all they of the said Mystery shall be under the government of two good men of the said Mystery, to be selected by the Mystery themselves, to survey that no default be allowed in their work, and if any be disobedient and will not suffer their work to be surveyed, they shall incur the penalty of rebels heretofore ordained in other Mysteries. Also that no stranger be permitted to work in the said Mystery within the Franchise of the City, until he has been found by the good men of the said Mystery to be skilled therein, and also before he shall have been received by the Mayor and Aldermen, according to the custom of the City, and have found sufficient sureties according to the same custom. Which Bill was here read and heard, and consideration being had thereon by the Mayor and Aldermen, it is is agreed and granted that the said Articles shall henceforth be observed, and that offenders shall be punished with the punishment aforesaid, in form aforesaid.

Translation of Norman-French Extract, Jor. 7, fol. 215b., 17th May, 1470, 10 *Edward IV. Lee, Mayor.*

In a Meeting &c., Matthew Philipps, deputy to Richard Lee, Mayor, R. Josselyn, John Yonge, T. Owlegreve, W. Taillor, G. Irlond. J. Stokton. J. Tate, W. Edward, J. Ward, B. James, J. Crosby, John Bromer, W. Heryot, and both the Sheriffs, and a Common Council of the Masters and Wardens of the Mysteries and Constables, etc.

This day it is determined by the aforesaid Masters and Wardens, that they with all speed shall have before them the Men of their Mysteries, and enjoin the said Men on the part of our Lord the King, that they henceforth do not use any scandalous, contemp-

tuous, false, or opprobrious words against the King, or in any way concerning the state of the Realm, upon peril that shall happen thereon.

Extract from Letter Book L, Folio 270 IVth Henry VII., 1488.

ORDINACO DE LORYMS.

Memorandum qd secundo die Octobris Anno Regni Regis Henrici Septimi iiijto Gardiani artis de Lorymers venerunt hic in Curiam dei dni Regis in Cama, Guyhald Civitatis, London, coram Willmo Horne Milite Maiore et Aldris ejusdm Civitatis et porrexerunt cisdm Maori et Aldris quandam bill sive supplicacoem cujus tenor sequitur in hec verba, ss: To the Right Honorable Lord the Mair and the Aldermen of the Citee of London. Shewen unto yo^r Lordeship and Maistershippes the Wardeyns of the crafte of Loryms, within the Citee of London, that where their p'decessours longe tyme afore this have made many and div's Ordennes which have not been auctorised wt'in the said Citee, for the politique guyding of the same mistere the which ordennces as well they as their p'decessors have peasibly enioued vnto now of late that the Maistr and Wardeyns that nowe been by yo^r honorable comaundement brought in their booke of their ordennces, in to th'eldhall where ye comaunded that all suche ordennces as were not auctorised, by the Auctorite of this honourable Court, to be cancelled and uttly to be voyde, wherethrugh the said Wardeyns, for lacke of ordennces be not of power to rule their said mistere without th'assistence of yo^r Lordeship and Maistershippes be shewed to thym in that behalf. Pleas it therefore yo^r saide Lordeship and Maistershippes to graunt vnto yo^r said besechers thise Articles underwriten to have and enioye the same by yo^r Auctorites lyke as they have used and enioyed by their owne auctoritees and comon assents:—Fírst that no psone of the said crafte worke, or do to be wrought any thinge belonging to the same crafte, vpon any Satirday vigil even or any other festivall even after none rongen in the pish Chirche, where any psone of the said crafte dwelleth vppon payn to lose and pay at evy tyme viijd. vernysshing, burnysshyng, and bosyng, oonly except.

Also that no man of the said Crafte from hensforth, that is to sey from the ffest of Seint Mighell Th'arcaungell unto the ffest of th'annuciacon of Oure Lady worke vppon any worke belongyng or touchyng to the said Crafte, but from vth of the Clooke in the mornyng unto vii of the Clooke at nyght, and no longer upon payne of vid.

Also, that when hereafter it shall hapne, any broder or sister to dye that than evy psone enfraunchised in the said craft, shall come in their most honest clothyng to the pissbe Chirche, where the said brother or sister dwelled to dirige, and on the morowe to a masse of Requiem, and there to offre at the same masse and not to depart vnto the said brother or sister be buried, if they by the Wardeyns of the said Crafte, for the tyme beyng, or by their deputie therto be duely warned. And that evy psone of the said Crafte, that is duely warned, come not to the dirige, masse and burying of any such brother or sister, and therof be duely convicte without a reasonable excuse, shall lose and paye lb. of wexe. And that evy such broder or sister within viii daies immediatly after his or their dethe if they in their lyfe paied well and truly their quartage, and other charges of the said Crafte shall have xxx Masses songen for theym at the coe charge and costes of the saide fealiship in oon of the iiii ordres of ffrires such as it shall pleas the Wardeyns of the said Craft, for the tyme beyng, to appoint.

Also that if hereafter any psone of the said Craft. the which before hath been of good guydyng and conv'sacion falle to pov'tie by Goddes sonde and hath no thynge to helpe hym self with all that than he shall have wekely a Reward of the coen boxe of the same Crafte, that is to say he that hathe been Wardeyn of the said Crafte shall have wekely x*d*. And he that hathe not been Wardeyn shall have wekeley viii*d*. And if any such psone so havyng suche almes of the said Crafte dye that than his burying to be paied for of his owne goodes if he be of power and ells to be paied and borne at the charge of the said Crafte.

Also that no psone of the said Crafte hereafter entice or peure unto his service any mannes app'ntices or allowes oute of his Maist's service duryng all suche tyme as the said Maist hath covenant of s'vice of any such app'ntice or allowes uppon payn of vis. viii*d*. as often as any suche psone doth the contrarie.

Also that no psone of the said Craft, the which hathe been or shalbe app'ntice to the same Crafte aft he have s'ved his tmes, take uppon him to set up any Shoppe vnto he be made freman of the said Crafte, uppon payn of vi *s*. viii *d*.; and than he to pay at the first openyng of his Shoppe toward the sustenacion and nedes of the said Crafte xii *d*.

Also that no psone of the saide Crafte take any Allowes or Journeyman whether he have been app'ntice to the same Crafte, or not but by the yeere. And that no psone of the said Crafte hire or take into his s'vice for the yeere, as is aforesaid any suche Allowes or Journeyman; but if the same Allowes or Journeyman were app'ntice, or made freman by Redempcion of the same Craft, vppon payn of vis. viii*d*. And ferthermore, that no psone of the same Crafte take into his s'vice, or make covenant with any Straungier borne, having the Cunnyng of the same Crafte without licence of the Wardeyns for the tyme beyng, vppon payn of xls. as often as any suche psone doth the contrie hereof. And that ev'y psone of the same Crafte havyng licence of the Wardeyns, to set any suche foreyn or estraungier, by the same Wardeyns, demed connyng on Werk, pay to the boxe, or that he sette the same foreyn or estraungier on werk iis.

Also if any psone of the same Crafte hereaft wilbe so mysadvised to rebuke or revile any of the Wardyns of the said Crafte for the tyme beyng, or any psone beyng of the Clothyng or any other mamie of the said Crafte, with vnfittyng languages or wordes in open audience of people or ellswhere, that than the same psone so doyng, shall lose and pay as often as he so dothe, vis. viii.*d*.

Also that if hereaft any psone of the said Crafte, fele hym self aggreved with any other psone of same Craft. that than the same psone that so feleth hym aggreved shall first compleyne hym and shewe his cause of grief to the Wardeyns of the said Craft, for the tyme beyng, or ev' he make his compleynt any further, to th'entent that the said Wardeyns, the said mat' of grief by theym understand may endevoure theym to set the pties in unite rest and peas. And what psone of the said Crafte that doth the contree hereof shall lose and pay at ev'y tyme that he so do dothe, vi.*s*. viii.*d*.

Also that as often tymes as any psone of the Craft or Mistier be duely sumoned by the bidell to appere before the Wardeyns of the said Crafte or Mistier, for the tyme beying for any mat' or cause at a c'teyn houre and place by theym to be lymytted and appere not at the same houre or nygh theruppon, and place accordyng to his sommons, that the same psone without a reasonable excuse, pay as often as he so doth to the boxe of the said Crafte, vi.*d*.

Also that no psone hereaft of the said Crafte open or disclose any lefull mat, or coicacon towching the said fealiship, the which hathe been moved or coied wtin the said Crafte uppon payn to pay as often as he so dothe iii.*s.* iiii.*d.*

Also that when and as often as any psone is or shalbe called or warned to appere afore the said Wardeyns at a certeyn place by theym assigned, for any mat or cause to be published and shewed before all the said Crafte, if any psone be hygh and owterageous in language and wilnot kepe silence at the comaundement of the saide Wardeyns that than ev'y psone so doyng shall lose and pay at ev'y tyme a pounde of wexe.

Also that no psone of the saide Crafte fromhensforth renewe or do to be renewed any olde ware belongyng to hym self and to selle the same ware ageyn for newe vppon payne of xx*d.* but it shalbe lefull to ev'y psone of the said Crafte to vernyssh and amende any thynge pteynyng to the same Crafte for any other psone.

Also that the Wardeyns of the saide Crafte for the tyme beyng, have full power and auctoritie fromhensforth at all tymes when they thynke necessarie to serche and ov'see alman' werkes belongyng to the same Crafte aswell wrought by floreyns as by men enfraunchised in the same Crafte that the same werkes be well werkemanly and truely made andwrought and all suche werkes as they fynde contrarie or otherwise made or wrought than is aforesaid, to forfait and the same werkes to be brought to th'eldhall there to be jugged accordyng to the lawes of this Citee.

Also that no psone of the said Crafte hereaft tynne any olde werke belongyng to the saide Crafte for to selle, that is to say Bittes Steroppes or any other thynge, except tho things that been hable to bere the fylyng, as ffrensshe Bittes, the which ben hable to bere the tynnyng vppon payne to lose at every tyme, that any suche psone so dothe a pounde of wexe.

Also that ev'y psone enfraunchised within the same Crafte, hereaft ycerely pay toward the nedys and expences in supportacion of the same Crafte. xii. *d.*, that is to sey quartly, iii. *d.* And what psone that denyeth or refuseth to pay the saide quartage, forfait and lose at ev'y tyme, that he so denyeth or refuseth, ii. *s.*

The oon half of the saide ffynes and forfaitures, to be to the use of the Chambre of the Guyldhall of the Citee aforesaid, and that other half to the use of the Coialtie of the saide Crafte.

Order of Court agreeing to the foregoing Ordinances.

Qua quidm billa sive supplicacoe lect & per dict Maiorem & Aldros plenius intellect quia videtur eisdm Maiori & Aldris qd Articuli in dict billa sive supplicacoe content sunt bon et honest, ac racion conson unanimi assensu & voluntate ordinerunt & decreverunt qd Articuli p'dicti hic intrentr de recordo modo & forma quibus petuntr futur tempor firmit obs'vand.

STOW says—

The Company of the Lorinors, or Lorimers, which they please to accept, I have received a note from themselves, that the 2nd day of October and 17th year of King Henry 7th, the Wardens of the Art of Lorimers came into the Court of our Lord and King, in the Chamber of Guildhall, in the City of London, before Sir Wm. Horne Kat, then Lord Mayor and Aldermen of the said City, proferring, then and there, a Bill or supplication to the Mayor and Aldermen. And this is all that I can find remembered of them.

2nd October, 4th Henry VII, 1488.

Extract Letter Book M., Folio 182, 3 *Henry VIII.* 1511.

Coie Consilm tent die Iovis XXIIII to die Julii Anno regn Regis Henrici, Octavi, tercio coram, Henrico Kebyll, Maiore, Rico Broke Recordatore, Thoma Knesworth, Rico Haddon, Stepho Jenyns, Georgio Monoux, Willo Butler, Thoma Exmew, Thoma Mirfyn, Rogero Basford, Johe Brugs, Nicho Shelton, et Henrico Warley.

To the Right Honorable Lord the Maior, and his Bretheren th'aldermen, of this Worshipfull Citie of London.

Piteously compleynyng. shewen vnto your good lordship, and maistershippes the Wardeyns Company and feaulishiip of the Mistere and Crafte of Lorymers, within this Citie, that where as div'se psones occupying and kepyng shoppes of the same occupacion contynuelly, use to bye and occupie ffrenche bitts for their singler luere and athvauntage, by reason whereof grete hurt and distruccion growyth, and is daily more like to growe to the ffeaulyshipp of the said Crafte. Insomoche as yong psones whiche shuld be brought up by appnticehod in the said occupacion, disdeyne to be bounden appntices to the same for feare that the said occupiyng and biyng of suche ffrenche bitts shuld be the cause of hynderunce of their lyfyng in tyme to come, and hitherto there hath be none acte, or ordennce gyfyn to the saide ffeaulishiip for the contry. In tender consideracon wherof it may please your wyse discrecions in the way of charitie, and for the weale and mayntenuce of the saide ffelishiip, whiche of long tyme hath bene a poore honest company among other w'in this Cite, that it may be thereafter ordeyned and establisshed that no psone beyng free of the same Crafte, or beyng enfraunchesed of another Crafte, occupiyng or kepyng shoppe of that Craft by or sell any bitts out suche as be made by the saide feaulishipps, w'in their owne occupacion under payne of ffforfeature of xls. the oon halfe therof to be employed to the use of this Citie, and the other half to the saide poore feaulishiip. And the saide poore company and ffelishiip shall ev' be bounde to pray for the good psvacion of this noble Citie and your good lordeship and maistershippes.

This bill is grunted and comaunded to be entred here of Recorde, in man. and fourme abovesaid.

Extract Letter Book X, folio 16.

Primo die ffebruarii 1570 *Anno Decimo tertio Elizabethe Regine,*

Itm this daye uppon the hearinge of the complaynt of the Lorymers of this Cytie, agaynst forreyns makers of byttes and other wares towchinge that occupacon, and bringers of the same to sell within this Cytie to Cytizens the courte tooke order that the saide forreyns bringinge suche wares as shalbe good and workemanlyke wrought, maye bringe the same and sell in grosse the same to Cytizens' Retailers, and not to sell the same by peece mele or otherwyse in their Innes or other places of this Cytie. And that the Wardeyns of Lorymers maye searche suche, but make no seisure thereof without order of this courte

1597, 19*th. April*, 39*th, Elizabeth, Billingsley, Mayor, Rep.* 24 *folio* 60.

Item this daye accordyng to Her Mats. Commaundmt signifyed to my Lord Maior by ye lres of the right honorable the Lls of Her Mats. Privey Councell purporting yt during this Sommer Seazon in respect of this pnte scarsity and dearth all the severall Companyes of this Citty, do from hensforth forbeare to make anye ffeasts in their halls or elsewhere, for ye avoyding of Consumpcon of victualls, and that the one halfe of the charge entended to be spente in suche ffeasts be paid in money by such psons as are to be at ye Chardge to ye handes of Thomas Waad and Richard Wright, Iremongers, Collectors appoynted for the same. And that the same shal be from tyme to tyme by them employed and distributed by order and dyrecton of this Courte towards ye relief of ye pore. And yt precepts be furthw'th directed to the Mrs and Wardeyns of all ye severall Companies of this Citty to signifie Her Mats. said pleasure in that behalf accordingly.

NICHOLS, SON, & CO., PRINTERS, 11, LONG ACRE.